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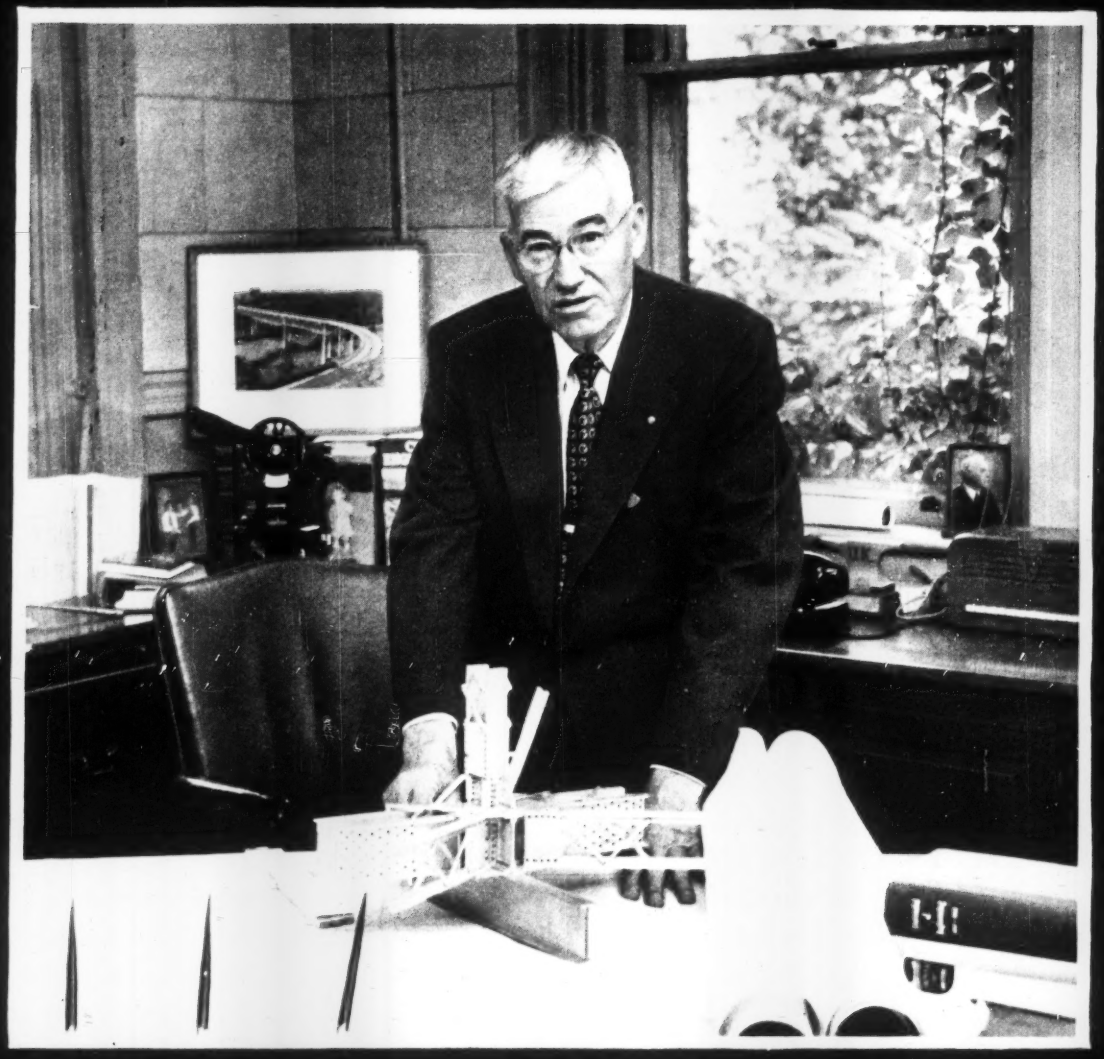

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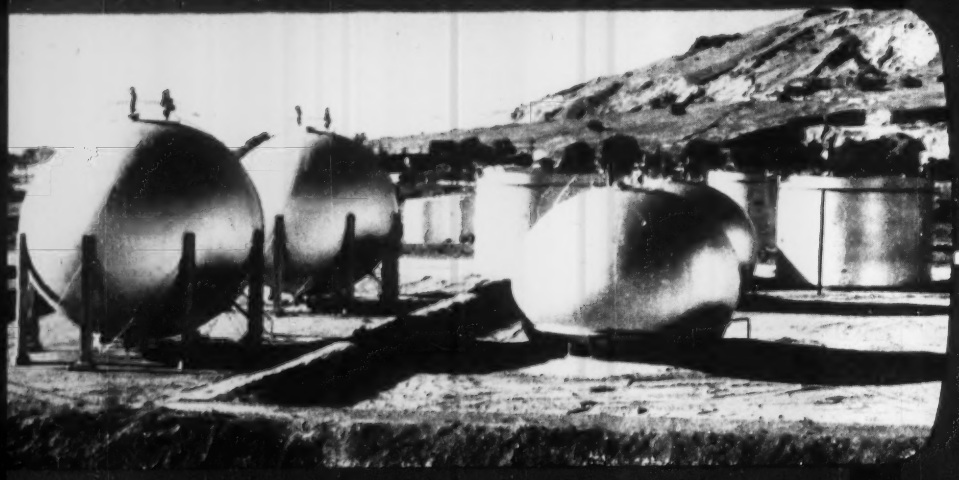

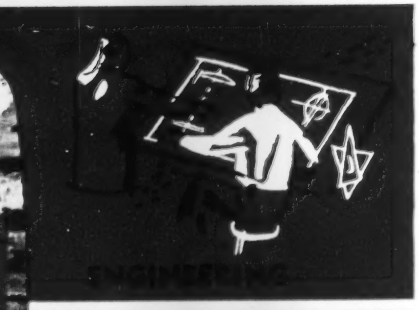

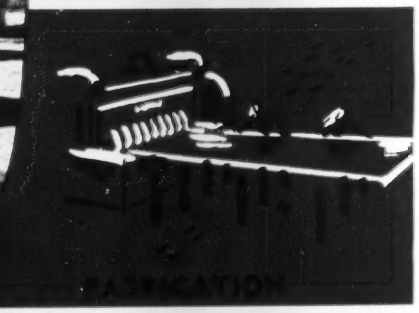

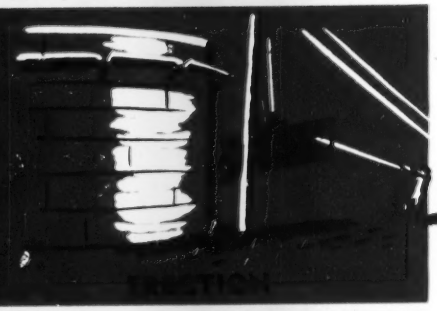

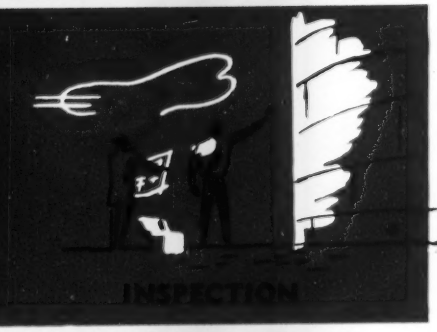

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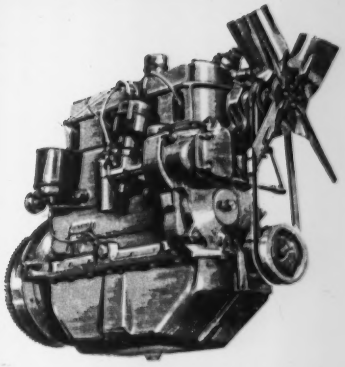

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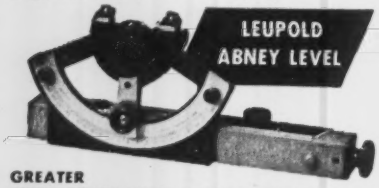

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Publisher

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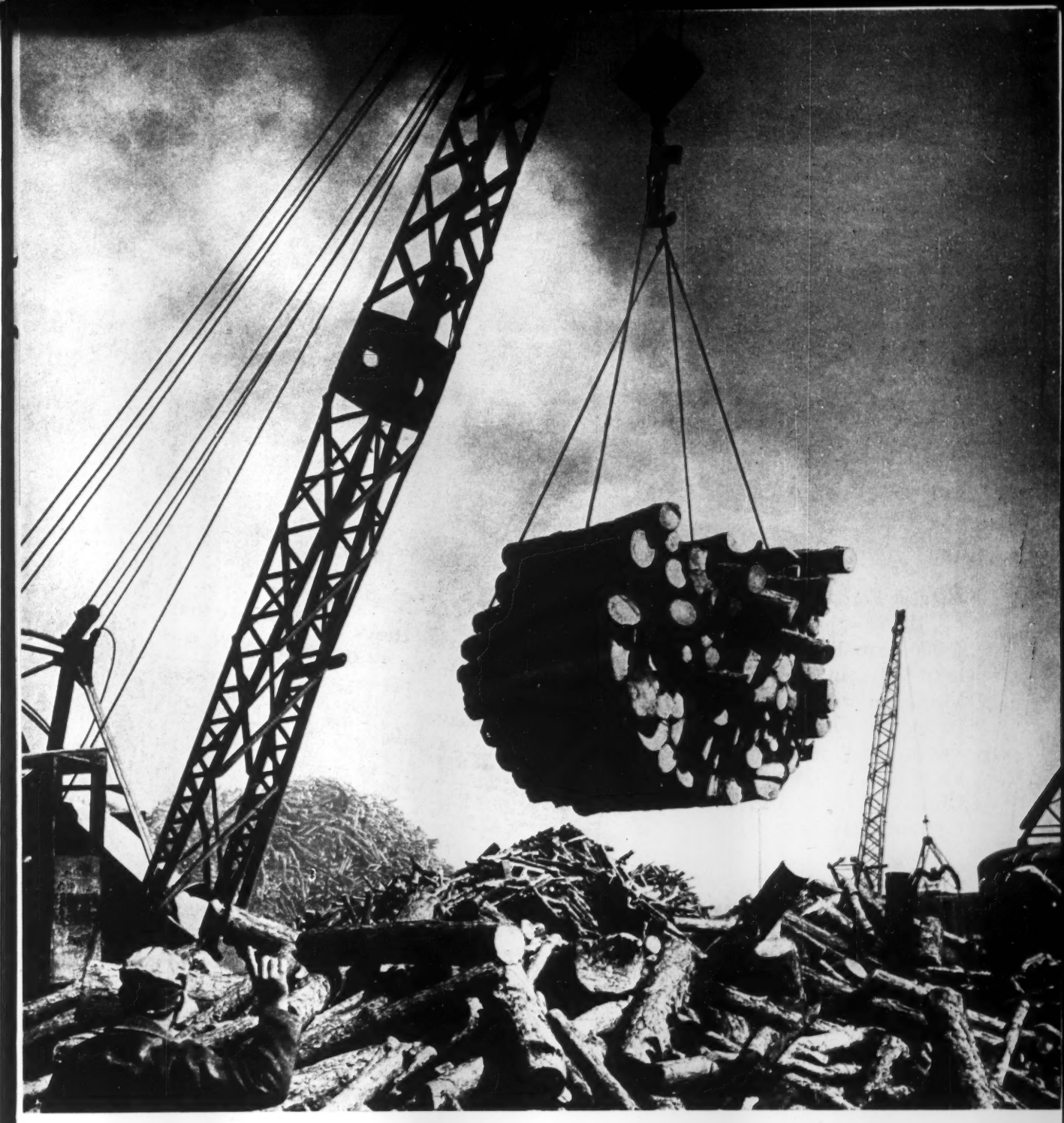

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Body range: 7½ ft. to 19 ft. or more	✓			✓	✓	
Front axle: Capacity—8000 lbs. or more Tread—70.55 in. or wider	✓ ✓	✓ ✓	✓	✓	N.P.	✓
Brakes: Vacuum hydraulic—lining area 542 sq. in. or more Air—lining area 569 sq. in. or more	✓ ✓	✓ N.O.	N.O.	✓ ✓	✓ ✓	
Cab: Deluxe cab available Curved one-piece windshield Total glass area—2103 sq. in. or more Hip room—60.75 in. or more Seat shock snubbers	✓ ✓ ✓ ✓ ✓		✓	✓		✓
Engine: V-8 type Max. horsepower—155 or more Horsepower per cubic inch displacement—.488 or more	✓ ✓ ✓	✓				
Frame: Side rail depth—9 in. or more Inside reinforcement Section modulus—13.83 or more	✓ ✓ ✓	✓ ✓	✓ ✓		✓ ✓	✓ ✓
Springs: Front—total capacity (at pad)—6000 lbs. or more Rear—total capacity (at pad)—20,000 lbs. or more	✓ ✓				N.P. N.P.	✓ ✓
Turning diameter: 45.9 ft. or less	✓					
Transmission: Synchronized type 5-speed direct or overdrive available	✓ ✓	✓	✓	✓	✓ ✓	✓ N.P.
Rear Axle: 21,000 lbs. or more	✓	✓	✓	✓	✓	

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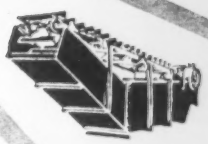
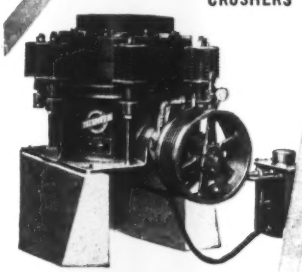


SAND DRAGS

SAND CLASSIFIERS

INTERCONE CRUSHERS



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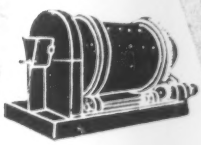

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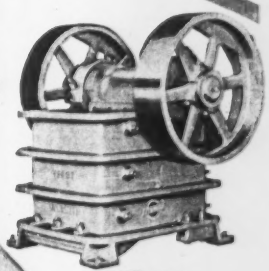
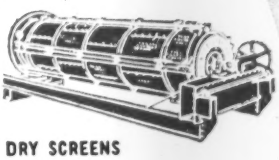


CONVEYORS AND BUCKET ELEVATORS

APRON AND PLATE FEEDERS



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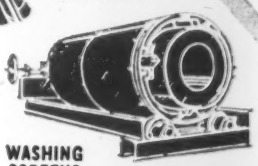

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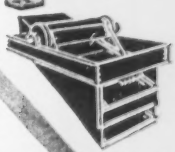

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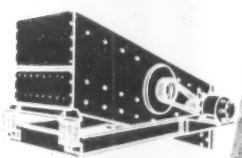

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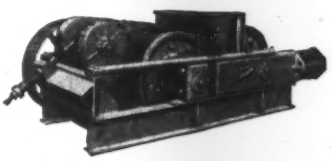

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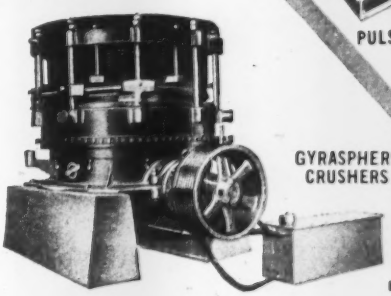

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LETTERS

Seismic design not simple

SIR: In reporting the excellent work which Father Lynch of Fordham University and other seismologists are doing in recording the motion of the earth's crust (ENR Aug. 27, 1953, p 52) you make a statement that is an oversimplification of the problem of design against earthquake: "Since an earthquake is a sudden slipping of the earth's crust, the main point in safe construction is to make sure that the structure will move as one block with its foundations when the slippage comes."

The implication is that if a structure is securely fastened to its foundations it will be earthquake-resistant. This probably was not intended because experience certainly does not corroborate it. The failure between the structure and its foundations has been very infrequent compared with the vast damage inflicted by earthquakes in parts of structures above their foundations.

The problem of a seismic design is to provide a structure which in *all its parts* will not suffer serious damage in earthquakes of historic intensity.

Ordinarily this might appear to be a mere quibble, but your statement has already prompted a San Francisco newspaper feature writer, accepting it at its face value, to attempt to discredit efforts toward proper construction in seismic areas. A simple mistatement thus becomes the foundation of a public disservice.

JOHN E. RINNE
President
Structural Engineers Association of California

Clarification needed

SIR: To avoid misunderstanding, and perhaps to avoid misguiding other states intent upon revising their professional engineering and architectural registration laws, I should like to clarify a point in your article (ENR June 11, p. 26) on Connecticut's revision of its architects' registration law.

The article notes the exemptions to that law, but fails to point out that professional engineers are exempted from the provisions of the act and that public officials may not accept plans or specifications unless stamped with the seal of a registered architect or registered professional engineer.

The exact quotation (Public Act. No. 284, part of section 5) may be of particular interest: "Except for

(*Continued on page 10*)

In This Hospital for Children

STRAN-STEEL® FRAMING

• Shortened construction time • Lessened construction costs • Assures lasting quality

The new two-million-dollar Le Bonheur Hospital for Children in Memphis, Tennessee (below), was chosen the hospital of the year in 1952. It has every modern hospital feature, including adjoining rooms for parents of sick children. Cutaway drawing shows Stran-Steel framing used throughout the corridor walls.

Stran-Steel Framing was specified by Le Bonheur Hospital's architect for its non-combustibility, straighter wall lines and its nailability feature which permits economical application of dry wall construction. Standard drawings furnished to the architect simplified, and in some cases eliminated, some of his work by doing away with the need for duplicating these drawings.

Architects and engineers for this building were J. Frazer Smith & Associates of Memphis, Tenn. Harmon Construction Co., Oklahoma City, Okla., was the general contractor.

Stran-Steel Framing is a complete system, designed for schools, hospitals, garden-type apartments, industrial, public and institutional buildings. Specified by architects across the country, it has resulted in increased economy, earlier completion, and greater client satisfaction. Write to us for general details or information pertaining to a specific problem.

GREAT LAKES STEEL CORPORATION
Stran-Steel Division • Ecorse, Detroit 29, Mich.

NATIONAL STEEL CORPORATION

STRAN-STEEL DIVISION, Great Lakes Steel Corporation, Ecorse, Detroit 29, Michigan

Gentlemen: Please send us factual information on the advantages of lightweight Stran-Steel Framing for industrial and commercial building.

COMPANY NAME_____

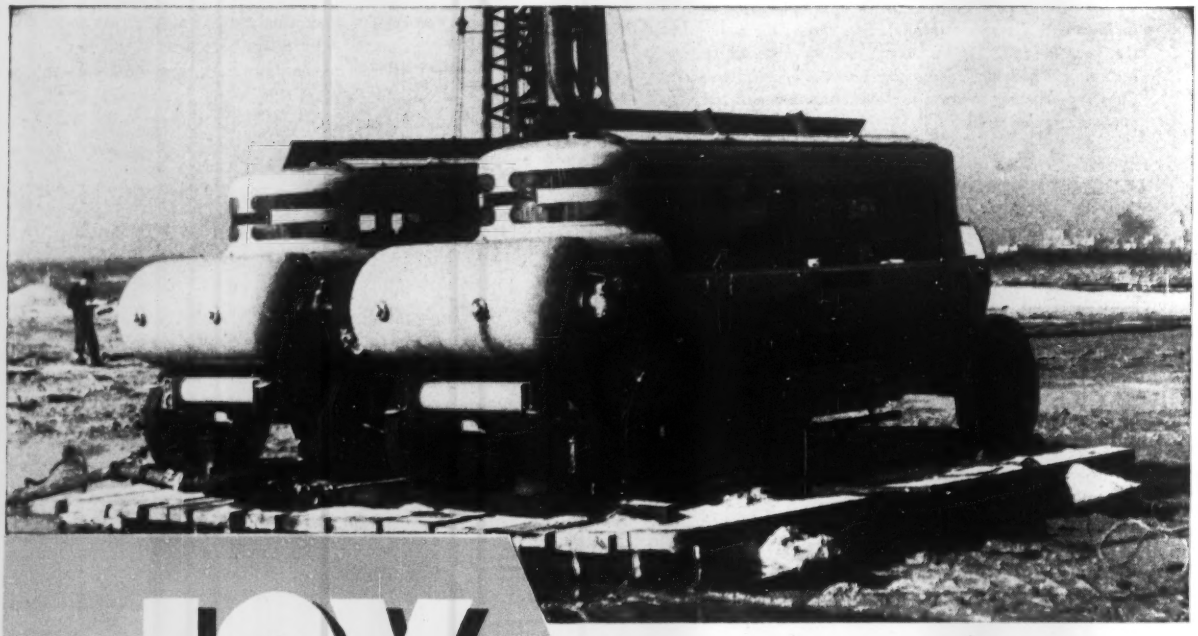
INDIVIDUAL_____

ADDRESS_____

CITY_____ ZONE____ STATE_____

Here's the BIGGEST Portable!

Gives you 5% MORE AIR THAN ANY OTHER ON THE MARKET



JOY "630"

The Joy "630" is a *big* portable—output is 630 CFM—but it's designed for real portability. Light in weight, compact and rugged, the "630" is actually smaller than many other units of less capacity.

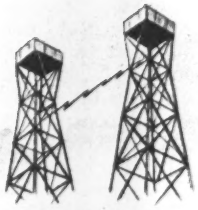
The Joy "630" is a completely self-contained compressed-air plant. Electric starter, full force-feed lubrication, "Cascade" oil cooling, two-stage compression, and many other advanced engineering developments enable it to out-produce all others. You'll find the Joy "630" a bear for work—it will operate *two* 4" wagon drills—and you'll find it able to cope with your heaviest air requirements. ● Write for Bulletin GG-1P. ***Joy Manufacturing Company, Oliver Bldg., Pittsburgh 22, Pa.*** In Canada: *Joy Manufacturing Company (Canada) Limited, Galt, Ontario.*

W&D C4633

Consult a Joy Engineer

JOY

CONSTRUCTION EQUIPMENT MANUFACTURERS FOR OVER HALF A CENTURY



1922—First power line carrier current equipment installed.

1944—First application of frequency modulation to power line carrier current equipment.

1947—First microwave relay system in commercial operation.

1875—Elihu Thomson, one of the founders of General Electric, transmitted and received wireless signals for a distance of about a hundred feet.

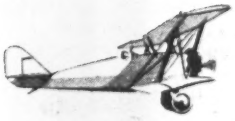
1915—Sample radio-telephone transmitter installed on two U. S. battleships and used in 1916 Spring Naval Maneuvers.

1931—Sonic locator developed for use by ships in fog. It was the first step toward radar.

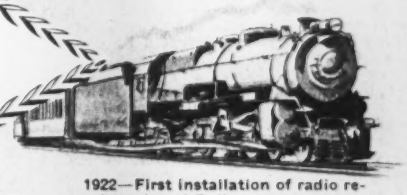
1937—First application of radio communication aboard fireboats. New York City Fire Dept. installation.

1878 75 1953

YEARS OF ELECTRICAL PROGRESS



1923—First airmail plane radio communication equipment installed and tested.



1922—First installation of radio receiver aboard Pullman cars.

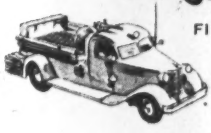
1927—First front-to-rear railroad communication equipment installed.

and today...

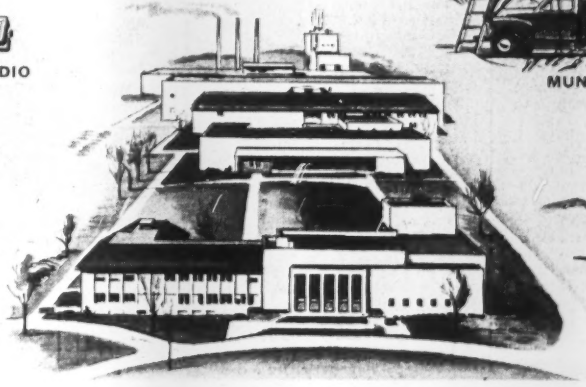
INDUSTRIAL 2-WAY RADIO

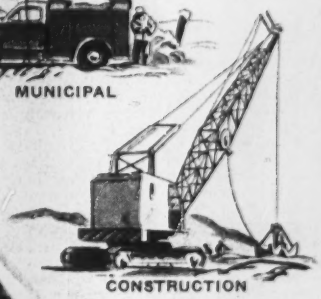
MUNICIPAL

POLICE



FIRE DEPTS.





CONSTRUCTION

Matchless Heritage IN COMMUNICATIONS ENGINEERING

From the several companies formed to manufacture Edison's historic electric lamp, G.E. is today a company with 200,000 products . . . engaged in 13 of the 21 basic manufacturing industries. Its tremendous human and material resources are constantly working to give you a better life with new and improved products.

Communications in your business is the outgrowth of many G-E "firsts." Today — using G.E.'s *high-performance, low maintenance* radio units—industry, utilities, and municipal government reap these benefits: instant reliable communication for increased productivity . . . area control . . . citizen protection.

For information write: *General Electric Company, Section 22103-15, Electronics Park, Syracuse, New York.*

GENERAL ELECTRIC

BRIEFS from The YEOMANS GUARD

Treatment Plant Helps Sell Home Lots at Better Prices in New Florida Subdivision

- *Unique plan of private financing provides for plant operation by city of St. Petersburg on pay-for-itself basis*

That a modern, efficient sewerage system and sewage treatment plant is a powerful help in selling subdivision lots is being effectively demonstrated by J. & P. Land Developers, Inc., in the promotion of "Garden Manor;" new 242-acre, 800-home tract at St. Petersburg, Florida. The sanitary system alone attracted enthusiastic buyers, and increased lot values by $450 to $500, say the developers.

Furthermore, upon completion of the development, the entire system and plant will be operated and maintained by the City of St. Petersburg on a self-supporting basis. A tax amounting to 30 per cent of the home owner's water bill is to be levied for 20 years; 60 per cent of that revenue will go to the developers to repay their $250,000 investment in the sewerage system and treatment plant; and the remaining 40 per cent will finance operation and maintenance by the city.

Main feature of Garden Manor's sewage treatment plant—complete, modern, ready to serve the new community—as a Yeomans "package" unit, combining a primary tank and digester.

As a "package" solution to a basic sanitation problem, and as an effective use of private capital, to achieve public benefits, Garden Manor offers a valuable pattern for similar developments, according to Samuel G. Johnson, Mayor of St. Petersburg; and Dr. Robert E. Rothermel, Director of Public Health of Pinellas County, praises the whole project as a wholesome example of "intelligent cooperation by public officials and commercial developers."

If you are interested in taking small community sewage treatment out of the "necessary evil" class and making it a profit producer, write for information of Yeomans "Packaged" Sewage Treatment Plants.

New "Package" Sewage Lift Station

- *easy to select*
- *easy to install*
- *easy to pay for*

A practical answer to an urgent and growing need for a low-priced, easily installed "package" dry pit sewage lift station for small residential units: our new "Package" Sewage Ejector Series 6280.

No Selection Problem—A simple matter to choose the right model by *population to be served* and the discharge head.

No Installation Problem—It's a "package"—complete, ready to place in the pit and connect.

No Payment Problem—simple in design, standardized, this compact unit is low priced, easy to pay for.

See Bulletin 6251, page 8.

☐ **Please send Bulletin 6251.**

90% B.O.D. Removal in "Aero-Filter" Plant at Plant City, Fla.

How's this for a letter?

"The Florida State Board of Health joins the City of Plant City in its pride in having such an excellent sewage treatment plant." The letter to T. J. McCall, City Manager, continues "and certainly Plant City has set an example which would be very profitable for other cities to follow."

In a later letter the State Board of Health added, ". . . we now have almost a year's operating data on this plant and . . . apparently it is achieving a B.O.D. removal in excess of 90 per cent.

This all-Yeomans waste treatment plant, built around an "Aero-Filter" and four dual Streamline Sludge Collectors, was designed by Alan B. Pimm, Consulting Engineer of Tampa, Fla., to meet the needs of the present population of approximately 10,000 with provision for possible future population growth to 15,000.

The happy sequel to this success story is the fact that numerous other communities *are* following Plant City's example. They're specifying Yeomans treatment equipment and getting high efficiency at low cost.

These stories, and others, are told in full in our periodical, **The Yeomans Guard.** It's full of news and useful information about the pumping of materials and the treatment of wastes, both domestic and industrial. A copy of the current issue is yours for the asking. Contact your local Yeomans Representative—listed in the telephone book yellow pages under "Pumps"—or write direct.

YEOMANS BROTHERS COMPANY

1999-1 N. RUBY STREET, MELROSE PARK, ILLINOIS

Manufacturers of: Centrifugal Pumps and Pneumatic Ejectors for Buildings, Municipalities, and Industrial Applications, and a Full Line of Waste Treatment Equipment.

LETTERS

plans for buildings or structures under provisions of Sec. 3 of this act, no official of this state, or of any city, town or borough therein, now or hereafter charged with the enforcement of laws, ordinances or regulations relating to the construction or alteration of buildings or structures, shall accept or approve any plans or specifications that are not stamped with the seal of a registered archtitect or registered professional engineer."

PHILIP W. GENOVESE
President
Connecticut Society of Professional Engineers, Inc.

Credit Due

SIR: I have examined your September 17 edition of the ENGINEERING NEWS-RECORD and was interested in seeing the article on Pages 45 and 46 concerning the Boeing B-52 Flight Hangar at Seattle.

I was particularly interested in this article since our company designed and fabricated "what may be the world's biggest unobstructed doorway."

As a prime contractor to the Boeing Airplane Company on this project we want to call your attention to an oversight in the matter of credit.

F. H. GROENINGER
Sales Engineer
International Steel Co.
Evansville, Ind.

CALENDAR

American Society of Civil Engineers, annual meeting, Hotel Statler, New York City, Oct. 19-23.

Construction Section, National Safety Council, Safety Congress, Hamilton Hotel, Chicago, Oct. 20-22.

Society of American Military Engineers, semi-annual convention, George Washington Hotel, Jacksonville, Fla., Oct. 25-26.

American Public Works Association, annual public works congress and equipment show, Roosevelt Hotel and Municipal Auditorium, New Orleans, La., Oct. 26-29.

California Section, American Water Works Association, Palace Hotel, San Francisco, Calif., Oct. 27-30.

American Concrete Institute, Southwestern regional meeting, Rice Hotel, Houston, Tex., Oct. 29-30.

National Council of State Boards of Engineering Examiners, annual meeting, Plaza Hotel, San Antonio, Tex., Oct. 29-31.

Fourth annual conference on coastal engineering, Council for Wave Research, Del Prado Hotel, Chicago, Ill., Oct. 29-31.

Illinois Traffic Engineering Conference, University of Illinois campus, Urbana, Ill., Nov. 3-4.

Structural Clay Products Institute, The Greenbrier, White Sulphur Springs, W. Va., Nov. 7-11.

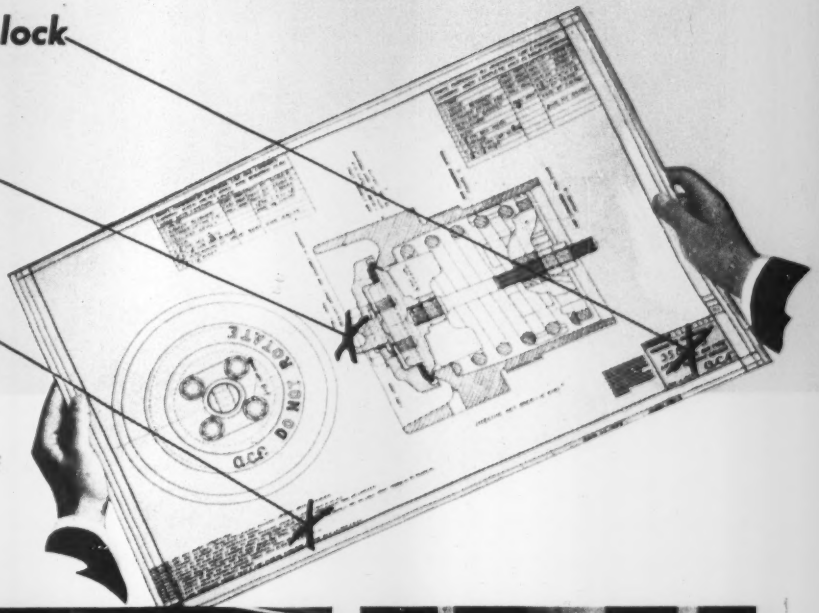
American Association of State Highway Officials, annual meeting, Wm. Penn Hotel, Pittsburgh, Pa., Nov. 10-13.

Conference on porcelain enamel in the building industry, National Academy of Sciences, Washington, D. C., Nov. 12-13.

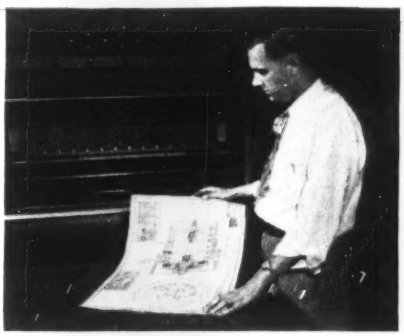
All these changes made

without one line of retracing

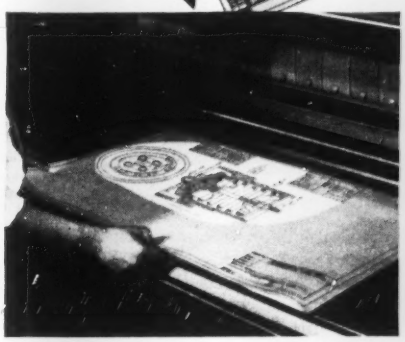
- *substitute new title block here*
- *transfer design to cloth*
- *delete shop notes and lot numbers*



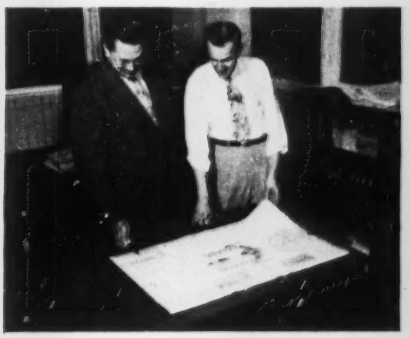
The American Car and Foundry Company, at its Milton, Pa., plant, has to modify hundreds of drawings like the one shown here to meet Army Transportation Corps requirements. Retracing would be much too slow . . . much too expensive. But how else can the job be done? *Kodagraph Autopositive Materials are the welcome answer!*



First—a positive photographic intermediate is made without a negative step by reproducing the original paper drawing on Kodagraph Autopositive Paper. *A fast room-light operation consisting of exposure in a standard print-making machine . . . and processing in standard photographic solutions.* The A.C.F. title block and shop notes are "scissored out" of this print . . . only the essential design remains.



Next . . . the Autopositive cutout of the design area is positioned under a Kodagraph Autopositive Film print, which is a re-usable master containing only the Army Transportation Corps title block. Then this composite is reproduced on a sheet of Kodagraph Autopositive Cloth—the same simple operation as was used previously for processing Kodagraph Autopositive Paper and Film.



Result: a sparkling, extra-durable reproduction comparable to an ink-on-cloth tracing. And the job done—not on the drafting board—but almost entirely in the print-making machine.

Additional time and dollars are saved by using Kodagraph Autopositive Materials to produce print-making masters from specification sheets and blueprints, and protect against the loss of valuable originals.

Kodagraph Reproduction Materials

"THE BIG NEW PLUS" in engineering drawing reproduction

MAIL COUPON FOR FREE BOOKLET

67

Write today for a free copy of "Modern Drawing and Document Reproduction." It gives complete details on the revolutionary line of Kodagraph Materials, which you, or your local blueprinter, can process conveniently, economically.

EASTMAN KODAK COMPANY,
Industrial Photographic Division, Rochester 4, N. Y.

Gentlemen: Please send me a copy of your illustrated booklet giving the facts on Kodagraph Materials.

Name_____ Position_____

Company_____

Street_____

City_____ Zone_____ State_____

Kodak
TRADE-MARK

G.E. Announces New Rigid Conduit

A new G-E WHITE rigid steel conduit that has easy bending, easy wire-pulling, and improved corrosion-resistance characteristics has been introduced by General Electric's Construction Materials Division.

These improvements have been made possible by a zinc-coating process called "metallizing", which has been proved by more than 30 years of service in other applications. Metallizing bonds a controlled, uniform coating of pure zinc to the conduit, threads and all, to provide lasting protection against corrosion. The conduit is then given the added protection of a coating of C-553 lacquer over the metallized zinc.

New G-E WHITE rigid conduit conforms with the American Standards Association specifications, is listed by Underwriters' Laboratories, Inc., and meets all U. S. Government specifications. Ask your distributor about it. Section C25-1032, Construction Materials Division, General Electric Company, Bridgeport 2, Conn.

New G-E WHITE is easier to bend because the "metallizing" process flame-coats the zinc to the conduit—eliminating the quenching and straightening that cause hardening.

Wire-pulling is easier because new G-E WHITE is lined with a new corrosion-resistant coating, containing an anti-friction agent.

You can put your confidence in—

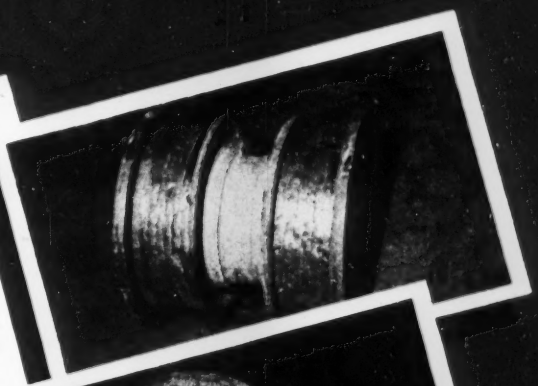
GENERAL ELECTRIC

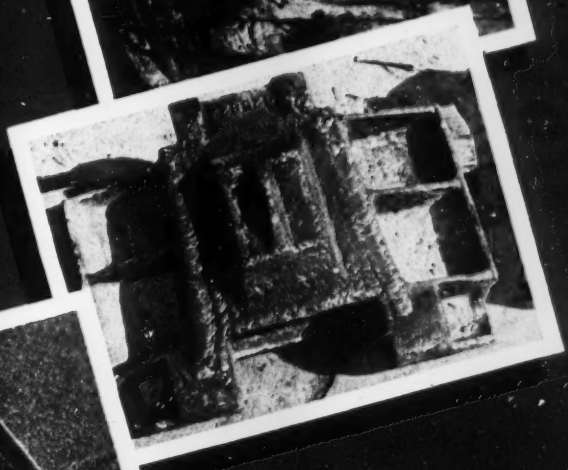
1879 75 1953 YEARS OF ELECTRICAL PROGRESS

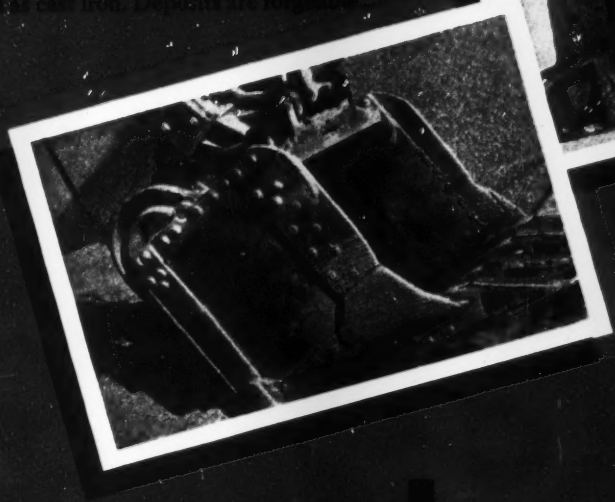
For Low-Cost, High Impact Strength

STOODY 1027

The *manual* hard-facing rod that cuts wear on EARTH-MOVING, ROAD-BUILDING AND SIMILAR HEAVY EQUIPMENT!







If you want low-cost wear protection, STOODY 1027 is for you. Here's an all-position AC-DC electrode that lays down a smooth, uniform deposit or can be applied in multiple passes for higher build-ups. Requires no slag chipping between passes. Runs free from slag interference and bonds readily to plain carbon, alloy and manganese steels as well as cast iron. Deposits are forgeable.

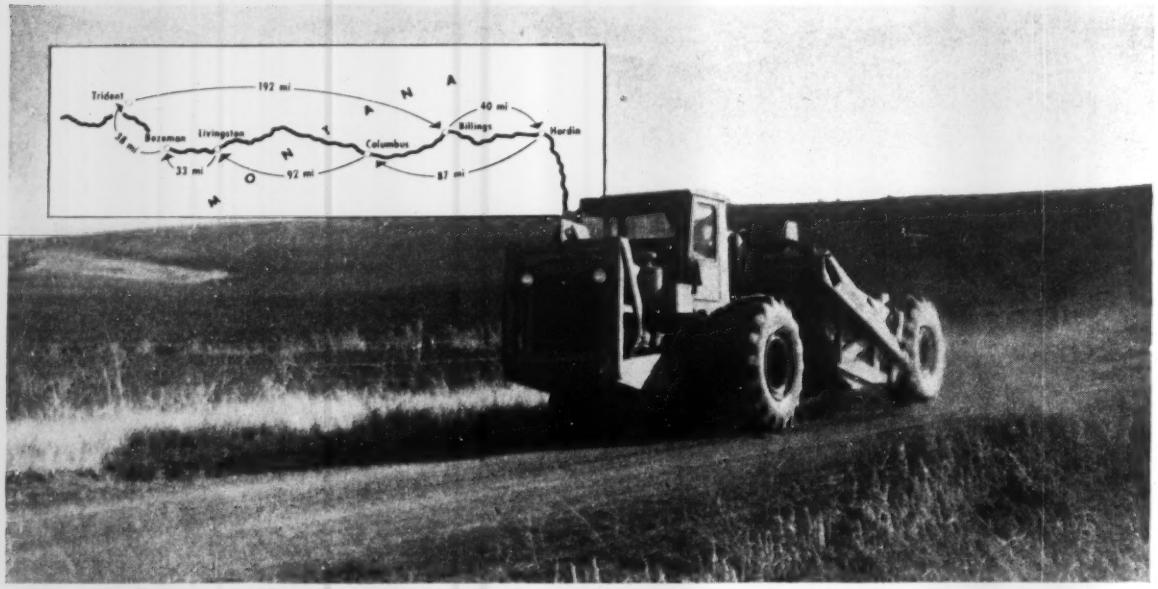
Ask your dealer for details (see the yellow pages of your phone book) or write direct.

STOODY COMPANY

11726 East Slauson Avenue, Whittier, California

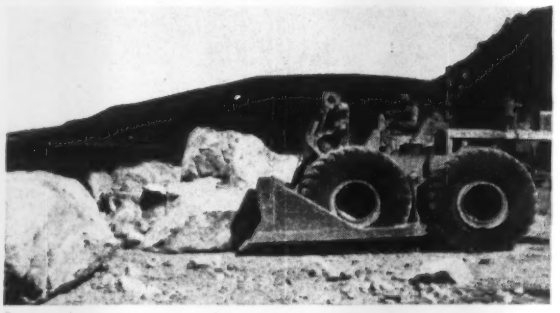
(ADVERTISEMENT)

Pictures of the month... by LeTourneau-Westinghouse...



IN 7 DAYS, 10 JOBS, 480 MI — Self-powered moves at 28 mph and high production resulted in a busy 7 days for this Montana-owned D Tournapull. Monday, the "D" stripped gravel from an old roadbed near Billings. Self-loading ability eliminated scarifying and cut 6 hrs from estimated time on this job . . . Tuesday, at Hardin, it leveled 5 acres of farmland in 5 hrs, 3 times as fast as could a crawler and 11-yd pan, according to contractor . . . Wednesday, it raised roadbed and finish-graded 2-to-1 slopes for a road near Columbus . . . Thursday, widened road near Livingston and filled old irrigation ditch near Bozeman . . . Friday, it completed 4 jobs 30 mi apart: (1) cut farm access road, self-loading up to 7 yds of loam in 45 seconds; (2) cleaned gravel from road ditches; (3) cut down old levee, moving 180 yds of hard clay hourly; (4) leveled field, despite sinking 4 in. into mud when loaded . . . Monday, averaged 20 mph on a 192 mi trip from Trident to Billings . . . Tuesday, leveled field, completing 1400 ft cycles every 2 min.

MOVES SAND THAT OTHERS CAN'T Finley P. Smith, clearing and leveling Florida beach property, uses 5 D Tournapulls and 3 Tournatractors for all work. He gives as typical output for each Tournatractor-loaded 7-yd "D" . . . 100 pay yds of sand hourly on 600 to 1000 ft hauls, 120 pay yds on 400 ft hauls. Says Smith, "No other scraper can move this beach sand. They're all too heavy to get traction in the poor footing."



HAUL 30 TONS OF ROCK — 90 miles south of San Diego, Calif, at Ensenada, Mexico, 6 rear-dump Tournarockers and 1 Tournatractor are extending this 130-ft-wide breakwater 5000 ft into more than 50 ft of water. Hauling over existing fill, Tournarockers make one-mile cycles with 12 pay yds every 7.7 minutes. Some rocks hauled measure 5 x 6 x 12 ft and weigh over 30 tons. Tournatractor (below) levels fill and maintains haul road. Say Equipment Owners Clark & Mansilla, "It's amazing how well these machines stand up under the rough conditions we are working in."

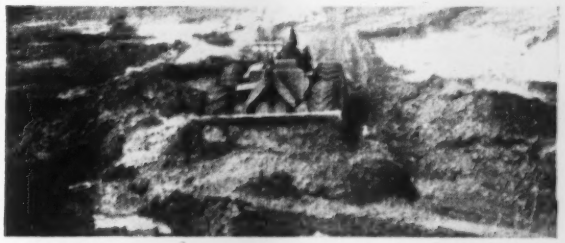
(ADVERTISEMENT)

Pictures of the month... by LeTourneau-Westinghouse...

KERRMOOR, PENNSYLVANIA — Diamond T Stripping Company, of Philipsburg, moves 7000 cu yds of overburden per 16-hour day with 2 Model "A" Tournarockers. These giant Rear-Dumps haul 50 tons of the blasted rock per trip. They are loaded by a 6-yd Lima shovel. Operators control Tournarockers easily . . . just push an electric switch to steer or dump . . . flick a small lever to change gears. No wrestling bulky levers . . . no clutching needed. Photos show stripping from a Class D seam of coal.

MINFORD, OHIO — $56.80! That's all Bill Ward has spent for repairs on his 2 Tournatractors — one 2 years old; the other, 3 months! Used mainly on industrial plant building jobs, units have been 99% mechanically efficient. They drive everywhere without planking. Main assignments: pulling 45-ton trailer, maintaining access roads, leveling dumps, grading parking areas, stockpiling coal.

BUFFALO, N. Y. — At western end of the 427-mile New York Thruway, William J. Crawford moves fill with 3 C Tournapulls . . . compacts with LeTourneau-Westinghouse Sheepsfoot Roller. On one section of job, each of his Tournapulls made a 2000 ft cycle every 4.8 minutes . . . delivered 114 pay yds of clay per hour.

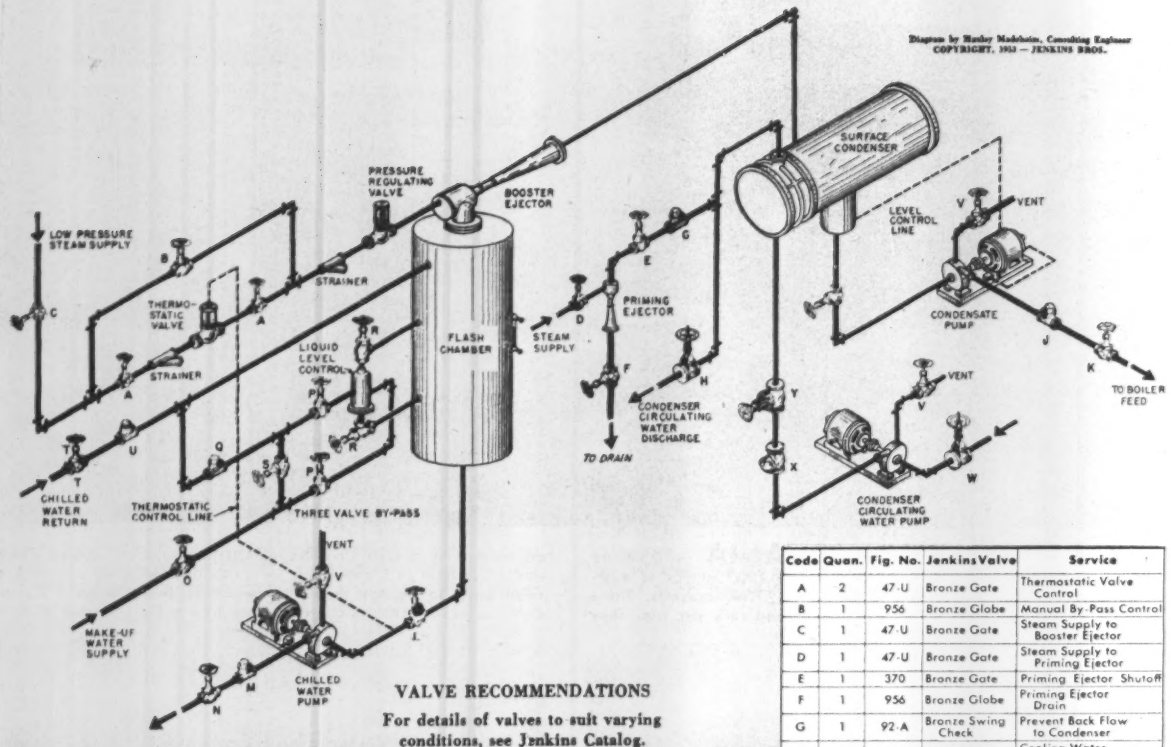


GLOUCESTER, MASS. — Big low-pressure tires give Gil Wyner's Tournatractor ample flotation for clearing muck from this rain-flooded gravel pit. Once pit is cleaned, it will provide fill for the final 3.7-mile link in the Boston Circumferential Highway. Despite abrasive footing, tires shown have worked 6,000 hours with one recap. For more information on this and other tools shown on these pages, write LeTourneau-Westinghouse Co, Peoria, Illinois.

Tournapull, Tournarocker—Trademark Reg. U.S. Pat. Off. Tournatractor—Trademark Pic 499 G

JENKINS PRACTICAL PIPING LAYOUTS

69



VALVE RECOMMENDATIONS

For details of valves to suit varying conditions, see Jenkins Catalog.

Code	Quan.	Fig. No.	Jenkins Valve	Service
A	2	47-U	Bronze Gate	Thermostatic Valve Control
B	1	956	Bronze Globe	Manual By-Pass Control
C	1	47-U	Bronze Gate	Steam Supply to Booster Ejector
D	1	47-U	Bronze Gate	Steam Supply to Priming Ejector
E	1	370	Bronze Gate	Priming Ejector Shutoff
F	1	956	Bronze Globe	Priming Ejector Drain
G	1	92-A	Bronze Swing Check	Prevent Back Flow to Condenser
H	1	651-A	I.B.B.M. Gate	Cooling Water Discharge Shutoff
I	1	370	Bronze Gate	Condensate Pump Shutdown
J	1	92-A	Bronze Swing Check	Prevent Backflow through Condensate Pump
K	1	106-A	Bronze Globe	Condensate Pump Control
L	1	370	Bronze Gate	Chilled Water Pump Shutdown
M	1	92-A	Bronze Swing Check	Prevent Back Flow Through Pump
N	1	106-A	Bronze Globe	Chilled Water Pump Control
O	1	106-A	Bronze Globe	Make-up Water Control
P	2	370	Bronze Gate	Automatic Valve By-Pass
Q	1	92-A	Bronze Swing Check	Prevent Backflow from Chamber
R	2	108-A	Bronze Angle	Level Control Shutoff
S	1	106-A	Bronze Globe	Manual By-Pass Control
T	1	106-A	Bronze Globe	Chilled Water Control
U	1	92-A	Bronze Swing Check	Prevent Backflow Chilled Water Lines
V	1	106-A	Bronze Globe	Pump Vent
W	1	651-A	I.B.B.M. Gate	Condensing Water Pump Shutdown
X	1	624	I.B.B.M. Swing Check	Prevent Backflow to Pump
Y	1	613	I.B.B.M. Globe	Pump Control

How to plan a

STEAM JET REFRIGERATION SYSTEM

The use of steam for air conditioning has increased steadily during the past few years, principally because of the low cost of steam. In plants generating their own steam, demands on the boiler plant are greatly reduced during the summer months, while plants having to purchase district steam usually benefit by reduced summer rates.

In the steam jet system shown, water returned from the chilled water coils of the air conditioning system enters the flash chamber which is maintained at a low pressure by the booster ejector. Here the water is cooled to a temperature corresponding to the boiling point at the reduced pressure. Heat is removed by the flashing of a portion of the returned water to steam which is removed by the ejector.

The booster ejector used in this system requires either a barometric or surface condenser. Pump drives may be either electric or steam turbine, depending upon local operating costs and the size of the installation.

Consultation with accredited piping engineers and contractors is recommended when planning any major piping installation.

To save time, to simplify planning, to get all the advantages of Jenkins specialized valve engineering experience, select all the valves you need from the complete Jenkins line. It's your best assurance of *lowest cost in the long run*. Jenkins Bros., 100 Park Ave., New York 17.

Complete description and enlarged diagram of this layout free on request. Includes additional detailed information. Simply ask for Piping Layout No. 69.

JENKINS VALVES

LOOK FOR THE DIAMOND MARK

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THE CONSTRUCTION WEEK

• **Who wants roads?**—There's meat for discussion among highway officials and the general public in two developments this week:

1. Pennsylvania's Department of Highways conducted a public opinion poll, discovered that citizens think the state isn't moving fast enough on highway work, would be willing to pay more taxes to get more roads built or repaired.

2. Ohio's Governor Lausche, in a public statement, firmly opposed a proposal (which citizens will vote upon in November) for a $500-million bond issue for state arterial highways.

Pennsylvania's Traffic and Planning Division interviewed 4,175 citizens in areas all over the state over a five-month period, found that despite record-breaking spending this year on the state's 41,000-mi system, 73% thought more money should be spent; 64% thought construction was moving too slowly to handle traffic; 56% would be willing to pay more taxes to get more roads.

Interestingly, a majority of those interviewed opposed bond issues as a means of financing road improvements.

In Ohio, Governor Lausche pointed out that the state already is building the $326-million bond-financed Ohio Turnpike, and has another proposal before it for a $500-million bond issue to finance a state building program. To pile another $500-million bond issue—secured by highway revenues—on top of all that, the governor said, could only mean a cut in available road funds for normal operations of the highway department.

• **Job hunt**—Admittedly working under a handicap, Philadelphia is looking for a couple of essential men to break a bottleneck in its Department of Licenses and Inspections that has held up inspection and approval of millions of dollars worth of building construction.

The handicap: salary. The jobs: chief engineer in charge of engineering and plan examination, chief engineer in charge of construction and inspection. Salary range is $8,520 to $10,700.

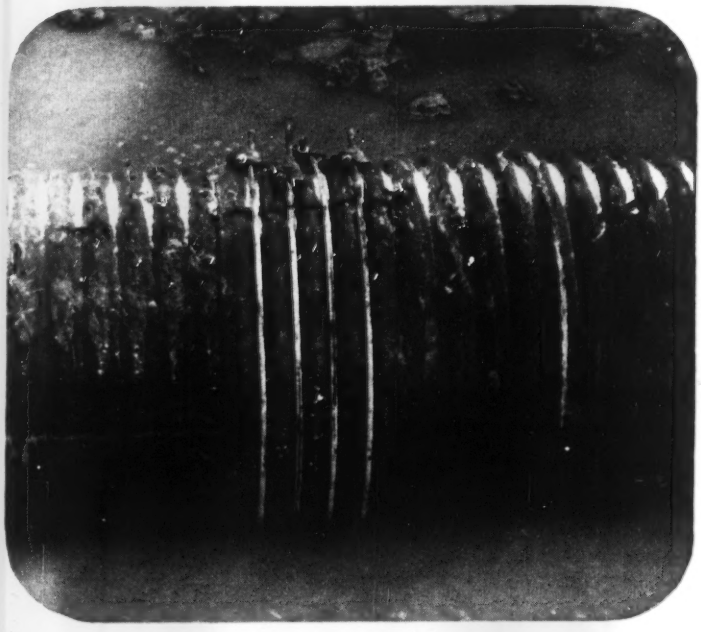
City officials have asked architects, contractors and engineers to make a nation-wide search for qualified men willing to accept the posts.

• **Surveyor a professional?**—Ohio courts have under consideration the question as to whether a licensed civil engineer or surveyor is a professional.

Carl Gulla, Cleveland surveyor, advanced the argument before Common Pleas Court that he has special status as a professional. The surveyor is being sued for $5,000 by a property owner who claimed a surveying error in 1952 caused him that much damage. Attorneys for Gulla told the court that, as a professional, their client could be sued for malpractice—and on that charge, a suit must be filed within one year. The property owner's attorneys claim the surveyor is "an ordinary working man," thus subject to suit for breach of contract—on which there's a four-year limit.

Underground activity won't sabotage THIS sewer

PIPE THAT TREADS WATER. Here is a close-up of the Armco watertight joint. Note the four bolted rods that say "no" to seepage.



History won't repeat itself here. Infiltration and the resultant undermining caused settlement and ultimate failure of a rigid, short section sewer used in this airport. But with the installation of Armco Asbestos-Bonded Pipe, these costly dangers have been eliminated.

The long lengths and watertight joints of Standard Armco Corrugated Metal Sewer Pipe assure a conduit of uniform strength. Seepage is no hazard. In unstable soils Armco Pipe will adjust itself to shifting foundations without joint separation. Nor will it crush or crack under the impact of heavy loads.

There is an Armco Sewer Structure to exactly meet your specific requirements. Standard Corrugated Metal Pipe or Pipe-Arch is available as plain galvanized for normal service, Asbestos-Bonded to handle severe corrosion or Paved-Invert to combat erosion. Armco Multi-Plate Pipe, Arch and Pipe-Arch extend the advantages of corrugated metal design to larger drainage structures.

Write for more information on these pre-engineered corrugated metal structures. Armco Drainage & Metal Products, Inc., 1743 Curtis Street, Middletown, Ohio. Subsidiary of Armco Steel Corporation. Export: The Armco International Corporation.

ARMCO SEWER STRUCTURES

ARMCO

WASHINGTON OBSERVER

Washington is facing up to some soft spots in the economy. It's a change in attitude—not panic thinking at all, but not blind wishfulness, either. Administration economists are figuring this way: We don't want a downturn in, say, housing to accumulate with cutbacks in steel and autos to the point where they might "snowball" us into a recession. So they're watching any "healthy adjustments" to see that they stay isolated.

•

These are the five areas where they now have "danger lines"—which, if reached, will indicate that remedies may be needed.

Housing—a drop below 900,000 starts. Estimates now are that 1953 will end with 1,000,000, with 1954 dropping off sharply.

Steel—a decline to 90% of capacity. Right now, the industry has dropped to about 95%, considerably below the mobilization peak of 102-103%.

Auto—a drop to under 5,000,000 cars. Today, it's 5,900,000.

Unemployment—more than 4,000,000 jobless. Today, it's 1,000,000.

Farm prices—Any more dip below today's "recession" level.

•

More liberal credit—would be the government's first step to offset a housing downturn. Already some loosening is going on.

Overall relief would come in tax reduction. It would get money into the hands of consumers immediately and would give business a breather.

Public works would be stepped up, too.

That's the thinking now as the Administration's experts shift from a view that the economy is at its healthiest, to a frank acknowledgment that soft spots must be watched closely.

•

Future of construction in the TVA area— is involved in the drive to get TVA in the good graces of the Administration.

Immediate issue is request for $30 million to build steam plant north of Memphis, Tenn. The Administration decided not to ask for the money last year, and Congress went along with this. If funds for this plant aren't approved in the budget that Congress starts voting in January, then most experts figure that TVA's days of expanding its plant are just about over, at least for the foreseeable future.

Pressure for a proposed $200-million-a-year building program for TVA will drop next May, too, when TVA Chairman Gordon Clapp leaves as the result of the expiration of his nine-year term.

New Secretary of Labor is no stranger to construction. James P. Mitchell (see page 27) handled labor relations for the Corps of Engineers during World War II—and got along well with building trades leaders.

On Taft-Hartley amendments he is described as "open-minded" right now.

•

Construction people can get new housing information by paying the increased cost of adding special questions to the BLS annual survey of housing permits compared with building starts. Trade associations and others in this way can get more detailed breakdowns on use of their specific products. For example, they can determine how many new houses built across the country contain timber roof trusses, or mineral wool insulation. Last deadline for adding questions to the survey is Jan. 1.

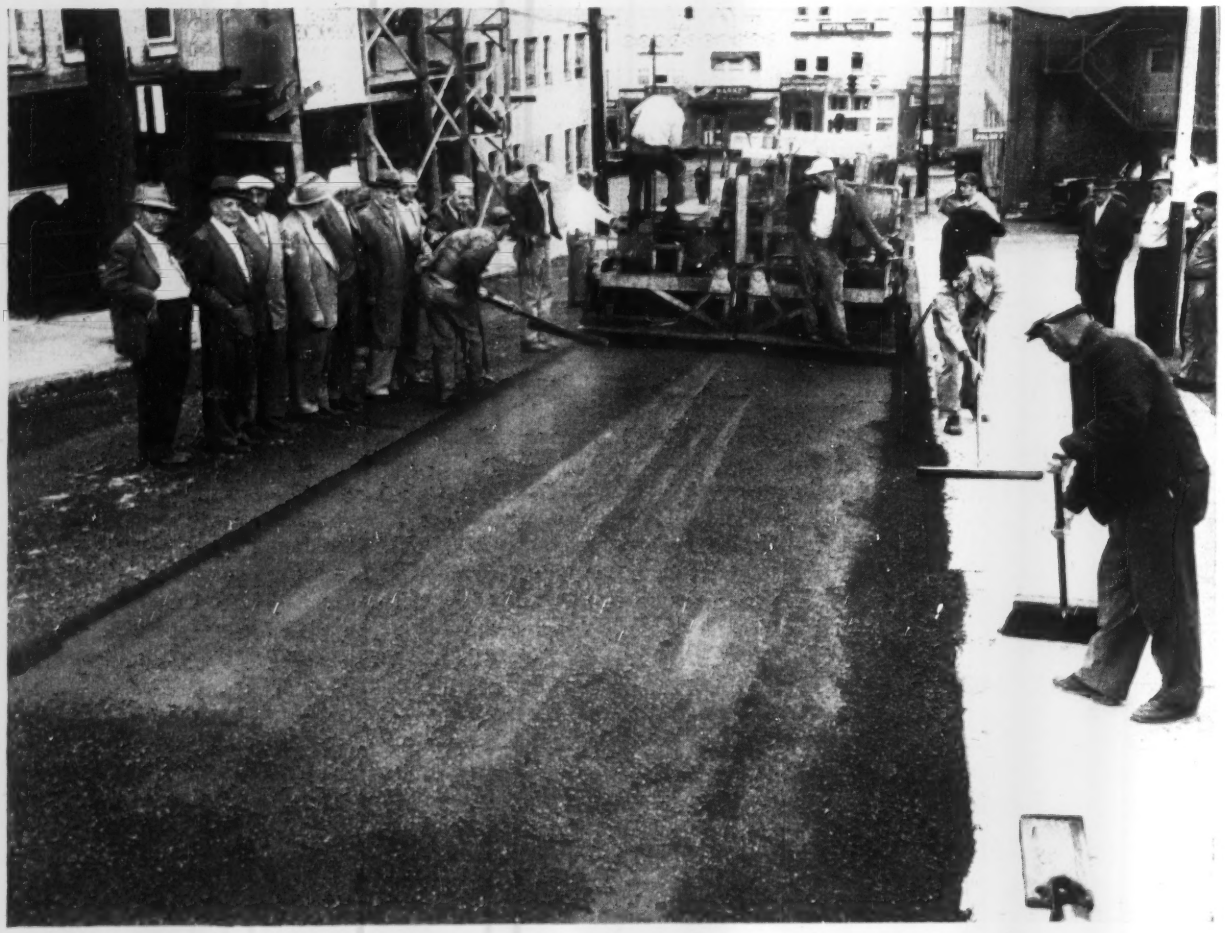
BLS is also sharpening up its monthly estimates of housing starts. Main soft spot has been figures on non-permit housing, a substantial part of the total.

. . . Another Street with Natural Rubber

From Seattle to Miami, from Los Angeles to Newfoundland, more and more stretches of natural rubber pavement are being laid by city engineers.

Natural rubber roads are today's fastest growing and most promising new highway development. Engineers everywhere are putting down test strips, because laboratory and in-place studies indicate that natural rubber roads will last longer, require less maintenance, and aid greatly in stretching their burdened highway budgets.

You can get complete information about laying a test strip of natural rubber-asphalt road from the Natural Rubber Bureau in Washington, D. C. This Bureau not only maintains the most complete laboratory for testing rubber-in-asphalt mixes but also has available a staff of trained field engineers to assist you in planning and installing test strips of natural rubber roads.



An array of interested officials look on as Pottsville becomes the first town in Pennsylvania to pave a block with natural rubber-asphalt mix. The experimental stretch was put down in September, under the guidance of Natural Rubber Bureau highway engineers.

Natural Rubber Bureau

1631 K Street, N. W., Washington 6, D. C.

Natural Rubber Bureau Research Laboratory, Rosslyn, Virginia

If you want help in laying a stretch of natural rubber road, or further information, write today.

H-bomb threat points up need for protective construction

New tax incentive policy aids plant shelter program; contractors playing active role in local civil defense

Mounting concern over Russia's H-bomb capabilities last week was pressing Washington policy makers to hasten a determination of the nation's requirements for construction of protective facilities—a program destined to cost billions of dollars.

Meantime, attention was called to a means of making at least a modest start on protective works for key industries. The Office of Defense Mobilization is now offering a 100% tax write-off on costs of building bomb shelters, blast walls and other protective structures in industrial plants located in critical target areas. Previously, this tax incentive was applicable only to new facilities.

Actually, the first existing plant to take advantage of the new tax incentive already had its construction well under way when Washington made the policy public. This is the Cincinnati Milling Machine Co., which is both strengthening a building to protect equipment and records and constructing a shelter to protect personnel.

• **Civil defense role**—Though it may be some time yet before "protective construction" projects become a significant field for the nation's contractors, the building industry already is civil defense-conscious to a surprising degree. An ENR survey of civil defense activities in 25 key cities last week revealed that most municipal programs even those still in low gear—include:

• An inventory of construction equipment.

• Mobilization plan for construction workers and supervisory personnel.

• Active participation of local chapters of the Associated General Contractors, trade unions and professional engineer societies.

A thumbnail sketch of these programs will be published in next week's issue.

• **Use of tax incentive**—Since the start of the post-Korea industrial expansion, the government has tried to stimulate dispersion of new plants outside the 70 most heavily industrialized cities. These are the cities considered "critical target areas" by the Federal Civil Defense Administration. Location outside those areas generally has been a condition for fast tax write-offs on construction and equipment costs for new defense facilities.

But, ODM frequently has waived the dispersion requirement because of manpower and supply problems. In these instances, however, plant operators were encouraged to strengthen new facilities against blast damage through the 100% write-off on protective construction costs, no matter what percentage was allowed on the plant itself.

Few companies took advantage of the tax allowance. But, now that the full allowance is no longer limited to new plants, the government is hopeful that protective construction will be undertaken widely by U. S. industry.

• **Cincinnati projects**—The new policy actually became effective in May. Last month, the first 100% fast tax write-off for protective construction on existing facilities was granted to the Cincinnati Milling Machine Co., Cincinnati, Ohio, for its Oakley plant.

Two tax write-off applications were approved. One, for $219,600, is to reconstruct, modify, strengthen and improve as a security area 240x60 ft of space in the basement of the underground portion of the engineering service annex.

The second, for $334,993, is for construction of an entirely new underground security structure of 200x85-ft floor area adjacent to an existing building.

Providing 9-ft 4-in. head room, this new facility will have a pedestrian tunnel to a street exit. Also, it will have ramps, stairways and elevators to basement and first-floor levels of adjacent buildings.

This underground structure, protected by a 12-in.-thick reinforced concrete roof slab and 3 ft of earth, will be the primary security area of the plant. It will have standby diesel equipment for emergency light and ventilation. The ventilating system will be equipped with filters, and cut-off valves will be installed in all supply lines to shut off water, gas and other utilities.

• **Conditions for tax incentive**—To

(*Continued on page 22*)

Spanish AE contract to four-firm combine

Joint Navy-Air Force board makes careful selection of companies on basis of geography, experience

The much-sought-after architect-engineer contract to design and provide construction inspection for airbase and Naval facilities in Spain, was awarded this week to a group of four U. S. engineering and architectural firms, carefully selected on the basis of abilities and geographical distribution.

The four are: Frederic R. Harris Inc., of New York City; Metcalf & Eddy, of Boston; Pereira & Luckman, of Los Angeles, and Shaw, Metz and Dolio, of Chicago.

The selection was made by a joint Air Force-Navy board, after several weeks of consideration of qualifications of dozens of firms. Exact composition of this board was not made public.

• **Bare facts**—The Defense Department announcement of the award was accompanied by only the barest possible listing of the firms and their qualifications, and did not include any details as to amounts involved or conditions to be imposed on the AE contractors.

However, careful assessment of the known facts—both concerning the firms involved and the U. S.-Spanish agreement signed three weeks ago (ENR Oct. 1, p. 22)—plus ENR's on-the-spot reporting from Spain and Washington would indicate the following as a safe rundown on what's going to happen:

1. Amount involved, well over $200 million.

2. Work involved, at least four air, two Naval bases (ENR May 14, p. 33).

3. "Lead" firm of the AE group—probably Metcalf & Eddy, which was in charge of the Air Force's huge Thule airbase work on Greenland (ENR Feb. 12, p. 30).

4. Probable lineup: overall charge

(*Continued on page 22*)

Bomb protection works . . .

(Continued from page 21)

qualify for 100% tax write-off:

- The facility must be located in one of FCDA's critical target areas;
- The cost of protective construction must be at least $25,000; and
- The company must be in a defense-producing or supporting industry.

Eligible companies must then obtain certifications from their:

- Design architect or construction engineer that specifications of the protective construction conform with latest FCDA standards and criteria for protective construction; and
- Local civil defense director that the project is "adequate and necessary for the protection of the facility, equipment, and personnel involved in case of enemy-caused disaster."

Routine application for accelerated tax amortization is then made to ODM which in turn clears with FCDA's Washington office.

ODM estimates that the costs of protective construction are about 20% above ordinary construction costs, and that such construction can reduce major damage by one-third.

How big the spending for protective construction will be nobody can say today. Federal Civil Defense administrator Val Peterson made a guess that construction of underground protective works for industry alone might cost $12 billion to $30 billion.

Spanish bases contracts . . .

(Continued from page 21)

and sanitary and airport paving work, Metcalf & Eddy; ports and Naval facilities, Frederic R. Harris; site-planning, Pereira & Luckman; housing and facilities, Shaw, Metz and Dolio.

5. AE contractors will be required to use Spanish engineers and architects, as will construction contractors later.

6. Bureau of Yards and Docks to handle overall construction work for the U. S. government.

• **Qualifications**—The firms selected for the basic AE contract award—their location, qualifications and experience in overseas work, permit some further appraisal of what the joint selection board took under consideration. All but one of the them have had considerable experience in working overseas; all have specialties that fit closely into the work to be done in Spain; all have worked for the U. S. government on sizable jobs; none is now heavily engaged overseas.

A firm-by-firm rundown:

• **Metcalf & Eddy** (Frank A. Marston and Harrison P. Eddy, Jr., principal partners) is one of the oldest U. S. engineering firms now operating, and has specialized largely in sanitary work—including long-range planning for Los Angeles and Pittsburgh, Pa. Through its work at Thule, however, it has gained much experience in airbase work, particularly in paving operations.

• **Frederic R. Harris, Inc.** (E. J. Quirin, president, F. H. Dechant, chairman of the board) has long specialized in marine work, having only recently completed work on major ocean piers at Kitimat, B. C., and Portland, Ore., and is now at work on design of a graving dock for Puerto Cabello, Venezuela. During World War II, the firm (then headed by the late Rear Admiral Harris) was a partner in Drydocks, Inc.—which developed and built many of the floating drydocks used in Naval operation, and (in another association) had a large part in construction of Guam Naval Base.

• **Pereira & Luckman** (William Pereira and Charles Luckman, general partners), was formed in 1950, when Mr. Luckman—who formerly headed Lever Brothers soap empire—joined Mr. Pereira, an established Los Angeles architect. Since that time, the firm has handled such major projects as the $127-million Edwards Air Force Base; Columbia Broadcasting System's $35-million TV center at Los Angeles.

• **Shaw, Metz & Dolio** (Alfred Shaw, Carl A. Metz, John Dolio), formed in Chicago in 1947, have specialized in apartment house and commercial building construction in and around Chicago, including work for the Chicago Housing Authority, and a number of commercial enterprises. During World War II, however, a predecessor firm handled such jobs as the $50-million U. S. Naval Ammunition Depot at McAlester, Okla.; the $45-million Naval depot at Earle, N. J.; the $27-million Kindley Field development for the AAF in Bermuda.

• **Trip coming up**—Moving rapidly to get the Spanish program under way, the Defense Department announced that Maj. Gen. Lee B. Washbourne, Air Force Director of Installations, would leave Washington Oct. 23, accompanied by military officers and representatives of the four AE firms, to inspect proposed sites for the work.

Concrete wins

W. Va. turnpike paving decision by 3-2 vote

Concrete won a three to two decision over asphalt in the West Virginia Turnpike Commission last week, as the choice was made on paving the 88-mi Charleston-Princeton toll highway.

Award of four concrete paving contracts totaling $19.5 million meant authorizing an expenditure of more than $4 million over the total amount of four bids which had been made for asphalt.

The original $96-million estimate for completing the turnpike was expected to be revised upward by some $10 million as a result of the decision favoring concrete and because of rising construction costs. Turnpike Commission Chairman D. Holmes Morton and State Road Commissioner H. K. Griffith, ex-officio member of the body, favored asphalt, claiming the difference between the two materials did not justify expenditure of the increased outlay.

H. F. Hutchinson, one of the three commission members favoring concrete, estimated that maintenance costs for asphalt would exceed those for concrete by $157,000 annually over 30 years. Hutchinson also declared that he weighed light reflection characteristics of black-top top and anti-skid quality of concrete before making a decision.

Successful low bidders for concrete paving of the first four sections of roadway to be put under contract were: J. B. Michael & Co., Memphis, $4.4 million, 20 mi; Nello L. Teer Co., Raleigh, N. C., $6.9 million, 30 mi; Bero Engineering Construction Co., Hampton, Va., $3.4 million, 16 mi; and R. B. Tyler Co. and Breslin Construction Co., Louisville Ky., $4.7 million, 20 mi.

West Virginia coal mine operators and unions both have been plugging for concrete on the claim that the coal industry would benefit from cement manufacture.

Illinois toll road body named

Judge Evan Howell of Springfield, Ill., has resigned from the U. S. Court of Claims to accept appointment as chairman of the new Illinois Toll Road Commission. The other two members of the commission are Chauncey McCormick of Chicago, a director of the International Harvester Co., and Orville Taylor, Chicago attorney. The commission's first undertaking will be an inspection tour of superhighways in six eastern states.

Advance payments

Control tightened on federal construction

The Defense Department's current policy on clamping down on advance payments to contractors is not a new stand. Actually, Defense Secretary Charles E. Wilson is requiring procurement agencies and contractors to conform to the law—Section III, Part 5 of the Armed Services Procurement Regulation.

But progress payments, partial payments—for work put in place—and other types of payments peculiar to the construction industry because of performance or partial performance of a contract are only slightly affected. They're being tightened to conform to contract provision.

Wilson's order is designed to free the government of providing virtually full initial financing for the contractor. Wilson figures that they should use their own funds to get work under way.

Result is that the government will be putting out less money initially when a contract gets started. That way, the defense take on Treasury cash will be lessened and the threat of breaking through the $275-billion debt limit eased to a degree.

As early as last May, the Defense Department announced that such a restriction was coming. Deputy Defense Secretary Roger Kyes told the annual meeting of the U. S. Chamber of Commerce that defense contractors would be required to provide more personal capital than they have in the past. He set this forth as one of the conditions that would be used in determining which contractors would remain in defense work during the leveling-off period of defense spending.

The governing section of procurement act is Article 3-503 which says that the government may not make advance payments to contractors unless:

- No other contractor can satisfactorily furnish the supplies and services without asking for advance payments;
- No other means of adequate financing is available;
- And, the amount granted has to be in relation to the contractor's using his own funds to the fullest extent.

Over the last three years requirements on granting advance payments have been largely overlooked for the sake of expediency. A number of contractors actually had begun work and had operated for a considerable time with letters of intent that are not sufficient collateral on which to secure a private loan.

Asphalt specifications are changed in Florida

Florida's state road board has amended its standard specifications in an effort to correct inequities in the per-gallon costs of emulsified, semi-solid and cutback asphalts. Previously the three materiels were specified on an equal basis.

Under the new specification, a contractor using emulsified asphalt is required to charge the state 20% less than he would for semi-solid and 10% less than for cutback on new roads and a flat 20% less for resurfacing.

State highway engineer Sam P. Turnbull said Florida's experience has been that more emulsified asphalt is required than semi-solid or cutback for the same amount of new road at a ratio of about seven gallons to five. This, he declared, has meant paying about $1,000 more per mile.

Dean Daniel V. Terrell to head ASCE

Daniel V. Terrell, dean of engineering at the University of Kentucky, Lexington, Ky., will take over as president of the American Society of Civil Engineers when the society meets for its annual convention in New York Oct. 19-22. (See cover).

The new president brings to direction of the society's affairs experience that extends far beyond the halls of the engineering school where he has been providing inspiration as well as instruction to a host of young engineers for four decades.

He began his engineering career as an engineer for the Santa Fe Ry., then went into highway work, has served for 20 years as consultant to the Kentucky Highway Department, and at present is director of its research work. In addition, he is a member of the Kentucky boards of registration of engineers and architects and chairman of the Kentucky Division of the Engineering Manpower Commission of Engineers' Joint Council.

Dean Terrell joined the teaching staff of the University of Kentucky in 1912 as acting professor of highway engineering. He was appointed professor of civil engineering in 1918 and assistant dean in 1942. In 1946 he became dean of the College of Engineering and director of the Engineering Experiment Station.

Dean Terrell joined the ASCE in 1918 and for many years has been active in its affairs, both professional and technical. He served as vice-president of Zone III in 1951-52.

First 'speed walk'

227-ft conveyor is for tunnel at Jersey City

The world's first passenger conveyor belt is scheduled to be constructed for the Hudson & Manhattan Railroad Co., a commuter line that connects New York City with Jersey City and Newark, N. J., under the Hudson River.

Contract calls for building a 227-ft "speed walk" in a ramp portion of a tunnel connecting the Erie Railroad station with the H&M R.R. tube platform in Jersey City. The 6-ft wide rubber conveyor belt will move at approximately one and a half mph with hand rails traveling at the same rate. Designed to reverse its direction, the system will convey passengers New York-bound in the morning rush hours and home-bound to New Jersey in the evening. It will negotiate a 10% grade over 125 ft of its length.

It will be built by the Goodyear Tire and Rubber Co. and the Stevens-Adamson Manufacturing Co. Cost has been set at about $75,000 but, being the first installation of its kind, this may be adjusted during construction. Because of the inclined section, the system will require more powerful motor and braking mechanism than pilot models that have been under test.

William A. Davis, general superintendent of the H&M R.R., places daily traffic through the tunnel at 14,000 and adds that the belt will be capable of handling a 50% increase over the present pedestrian movement.

Underground water study sought by New Mexico

Governor Edwin L. Mechem of New Mexico has asked federal agencies to help with a $2-million program to survey underground water potential in his state.

Already he has received a pledge of backing from the Department of Agriculture, but that was accompanied by a suggestion that the principal support probably would have to come from the Interior Department.

Mechem wrote Agriculture Secretary Ezra Benson, noting the department's drought relief program in the southwest, but urging that "an early, accentuated program of exploration and development (of underground water potential) would contribute most to the solving of Southwestern water problems". Benson expressed agreement with the governor's ideas, said agencies in his department would help, but passed the letter along to Interior Secretary McKay.

Findings made on General Motors blaze

Lack of fire walls, sprinklers held responsible for huge loss but no significant building design changes foreseen

Seven factors are listed by the National Fire Protection Association as responsible for the destruction on Aug. 12 of the General Motors Corp. automatic transmission plant at Livonia, Mich. (ENR Aug. 20, p. 28), reputed to be the biggest industrial fire loss on record.

Present indications are, however, that no significant changes in building design will result from the NFPA findings because of costs and production problems involved.

A final report on the $55-million disaster in the NFPA Oct., 1953, QUARTERLY, blames:

"1. An undivided fire area of 1,502,500 sq ft (34.5 acres) in which absence of fire walls and roof vents denied access for fire fighting and prevented localization of heat and smoke.

"2. Inadequate sprinkler protection (only 20% of the total area protected —no sprinklers where fire started).

"3. Incompletely engineered processes. Fire protection for the dip tank did not protect the drip pan [under a conveyor immersing parts in oil in the dip tank]. Due to the processes, oily deposits had a tendency to accumulate and increase the fire hazard of the several heat-treating areas; yet this condition does not appear to have received engineering attention.

"4. Unprotected steel construction, in particular the thin steel deck that did not offer sufficient insulation between banking heat and the builtup roof covering to prevent asphalt from melting and dripping through joints of the heat-warped deck. Steel trusses collapsed in a matter of minutes.

"5. Use of oxy-acetylene torch under unsafe conditions.

"6. Lack of an effective private fire brigade.

"7. Delayed fire department notification."

The transmission plant, designed by the GM Argonaut Realty Division, had been built in 1949. It was mostly one story high, with a two-story section at one end. Framing was unprotected structural steel, with columns spaced 40 and 48 ft apart. The exterior consisted of brick apron walls and large areas of glass. The flat roof was composed of light-gage steel decking covered on top with asphalt-mopped layers of "tar paper," 2 in. thick glass fiber insulation, several more layers of asphalt-mopped "tar paper," and tar-and-gravel surfacing.

• **Fire spread swiftly**—According to the NFPA report, the fire was started by sparks from an oxy-acetylene cutting torch igniting oil in a conveyor drip pan nearly 11 ft above the floor. (The conveyor immersed metal parts in rust-inhibiting liquid in a dip tank. This liquid had a 97.7-F flash point.) Discovered by the welding crew, the fire was immediately attacked with two carbon-dioxide extinguishers from a ladder; but when the extinguishers were emptied the flames spread along the 120-ft length of the drip pan.

The drip pan warped, spilling its flaming contents on the wood-block floor. Oily condensate on steel roof members in a nearby heat-treatment area ignited. And despite the efforts of a plant fire brigade, hot tar and asphalt soon flowed through cracks between strips in the heat-warped roof deck, caught fire and dispersed the fire fighters. Three men, including the fire brigade chief, however, were trapped and killed. Meanwhile, about 4,200 other employees had evacuated the building without serious injury.

The Michigan State Fire Marshal believes there was a delay of 15 to 20 minutes before one of the plant protection men telephoned the Livonia fire department. A GM official, though, estimates the elapsed time as 6 minutes.

Upon arrival, the Livonia fire companies found the 400-ft southern end of the building in flames. Twenty hose streams were put in operation on all sides, but since the building was 866 ft wide and hose streams could penetrate only 50 to 75 ft, manual fire fighting had little effect, the NFPA report says. The fire could not be extinguished and finally burned itself out the following day.

• **Other fires similar**—The NFPA report calls attention also to the similarity of this disaster to other large-loss industrial fires reported in 1952. Excessive areas without fire division walls were noted as contributing factors in 66% of those fires. In 32%, flammable liquids contributed to the spread of fire, and in 70% of the plants automatic protection was lacking. Lack of employee training resulted in delayed alarms being sent to the fire department in 21% of the cases.

Questioning of architect-engineer firms which have designed many plants for the automotive industry indicates that no significant changes may be expected in plant design as a consequence of the fire. Some engineers say they will give more consideration to insulating-type roof decks, such as concrete or gypsum plank. But they do not believe installation of fire walls in an assembly plant is feasible, because of the conveyors needed.

• **Ford experience**—The GM fire has done little to alter thinking at the Ford Motor Co. In 1952, Ford had suffered a serious fire at its Livonia tank plant, which caused a revision then in plans for future construction. No further revision now seems necessary.

Immediately after its Livonia fire, Ford converted from a self-insured basis to purchased insurance. That step offered the benefit of inspections by an outside agency. In addition, Ford established a fire controller's office, which works closely with insurance company inspectors.

Nevertheless, Ford and the insurance companies disagree on some fire-protective measures. The insurance companies prefer that all plants be equipped completely with sprinklers. Because of the cost, Ford is not convinced that full sprinkler coverage is warranted.

Ford engineers do not look favorably on fire walls either. But they are considering fire curtains, hung as far down from the roof as possible without interfering with manufacturing operations.

Dallas hotel to feature cantilevered floor slabs

Last week in downtown Dallas, Texas, ground was broken for the $15-million, 18-story Dallas Statler Hotel—one of the largest hotels (1,001 rooms) to be built in more than 25 years.

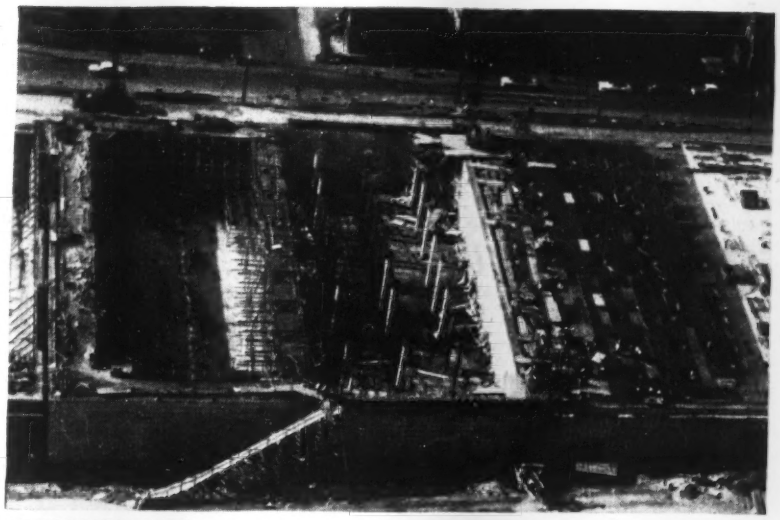
The hotel will be the first multistory building to make full use of "flat-slab cantilever" construction. According to the architect, William B. Tabler, of New York City, employment of the cantilever principle will eliminate about half the columns and footings necessary for older types of buildings.

Exterior walls consist of large glass areas in aluminum sash and porcelain-enameled steel spandrels.

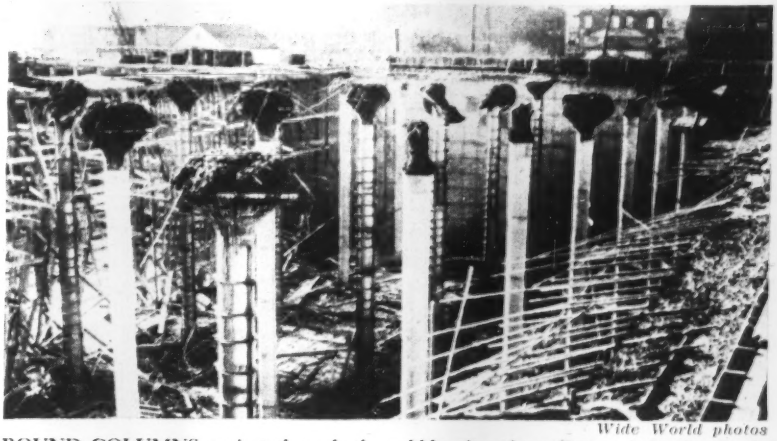
The Statler is designed in the shape of a "Y." Two prongs of the "Y" will converge at the main entrance.

Banquet facilities will include an area capable of seating 2,000 persons in one group—the largest single ballroom area in the Southwest.

Robert E. McKee General Contractor, Inc., of Dallas, expects to complete the hotel by late summer of 1955.



CONCRETE TANK, one of four being built at Everett, Mass., for petroleum storage, was to have a flat-slab roof but the formwork gave way while concrete was being placed (center). Roof forms are still in place for the tank on the right.



Wide World photos

ROUND COLUMNS project through the rubble after the collapse of the formwork. Capitals and drop panels were being poured with the roof slab.

Concrete tank roof failure probed

Cause of the collapse of a portion of the roof of a large rectangular concrete tank being constructed for Esso Standard Oil Co., at Everett, Mass., is baffling investigators. This mishap, on Oct. 3, killed one man and injured 18.

The tank in which the failure occurred is one of four of equal size being built side by side. Each tank is 180 x 168.5 ft by 30 ft high. They were being constructed to provide additional storage of crude petroleum for an adjacent refinery, which has just been rebuilt and now, with 24,000-bbl daily capacity, is New England's only fluid-cracking plant.

Roof of each tank is a flat slab supported on the 2-ft 4-in. thick exterior walls and 63 round columns in the interior, spaced 21 ft apart in one direction, 18 ft apart transversely. The columns were cast in cylindrical steel forms. The column capitals and drop panels were cast with the floor slab.

At the time of the failure, one tank had half its roof cast and the forms stripped, the other half partly formed. The pour for half the roof of a second tank was within five to ten minutes of being completed. Involving about 400 cu yd of concrete, this pour had started at 7 a.m., and the collapse occurred at 12:05 p.m.

The failure occurred in the wood formwork. The contractor, the Aberthaw Co. of Boston, has engaged the Boston engineering firm of Thompson & Lichtner Co. to investigate.

Formwork is reported to have been erected in conformity with Aberthaw's usual practices and standards. The 10-in.-thick roof slab was being cast on 4 x 12-ft panels of ¾-in.-thick plywood. These were supported on 3 x 4-in. joists spaced 16 in. c-c and spanning 5 ft 3 in. Pairs of 2 x 8s carried the joists and in turn were supported on 4 x 4-in. spliced posts spaced 6 ft apart, which extended to the tank floor. The posts were braced horizontally with four sets of braces in two directions. They also were braced diagonally.

Pollution control

119 projects needed in lower Columbia basin

The lower Columbia River basin needs 119 municipal and industrial pollution abatement projects costing an estimated $11 million to achieve effective control of sewage and wastes now flowing freely into the area's watercourses. (See inventory of nation's sewage needs on pages 37-42).

This is the conclusion of a joint state-federal survey of the problem which brings up-to-date previous investigations, the last of which in 1951 was concerned with the Willamette River basin of Oregon, a major lower Columbia Valley tributary.

Affected are cities and plants in Washington and Oregon along the lower stretches of the basin rivers and streams from Pasco in the far southeast corner of Washington to the Pacific. Recommendations exclude the Snake River, major tributary entering the Columbia just below Pasco but include the Yakima River, which also joins the main stream near Pasco. The Willamette also is excluded.

Washington's needs were set at 27 municipal and 43 industrial pollution control facilities costing $8.1 million; Oregon's at 17 municipal and 32 industrial facilities costing $3.15 million.

Portland is included among the Oregon cities, but Curtis M. Everts, Jr., state sanitary authority engineer, says that the Oregon metropolis will complete its intercepter sewage and pumping station projects next summer when most of the wastes now flowing into the Willamette and thence into the Columbia will be treated.

Throughout Oregon, Everts reports, cities have awarded some $33 million in sewage treatment facilities since 1945 and he predicted that by the end of 1954 about 93% of the state sewage areas would have adequate disposal systems.

The report of the U. S. Public Health Service, Oregon Sanitary Authority and the Washington Pollution Control Commission noted that corrective measures have been taken at 82 of 201 sources of pollution in the area covered by the survey.

$40-million airbase construction job is scheduled for Plattsburg Barracks

Last week real estate agents of the Defense Department initiated acquisition of a 3,600-acre addition to the grounds of the historic Plattsburg Barracks in northern New York. Thus the first step was taken toward actual construction of a new Air Force base that has been in the planning process for several months.

Present appropriation for the work is $31 million, with an estimated cost of $40 million for the first phase of development.

Air Force installation representative for the project is Col. B. M. Venable. Construction and real estate acquisition are being accomplished by the New York District, Corps of Engineers, under the supervision of Col. B. Talley, North Atlantic Division engineer, Col. A. H. Davidson, Jr. is district engineer.

In the latter part of December, the Corps of Engineers expects to open bids on buildings, airfield construction, and on piping installations for handling aircraft fuel.

Airfield construction will include one 10,300 x 200-ft runway. Alternative bids will be taken on all-concrete construction and on a combination of bituminous and concrete. In both cases, 1,000 ft of runway at each end will be 14-in. plain concrete. In the all-concrete alternative, the interior 8,300 ft. will be 13-in. plain concrete on compacted earth. In bituminous material, the same stretch will consist of a 6-in. base course of selected material, a 6-in. course of macadam, a 2½-in. hotmix binder course and a 1½-in. hotmix surface course.

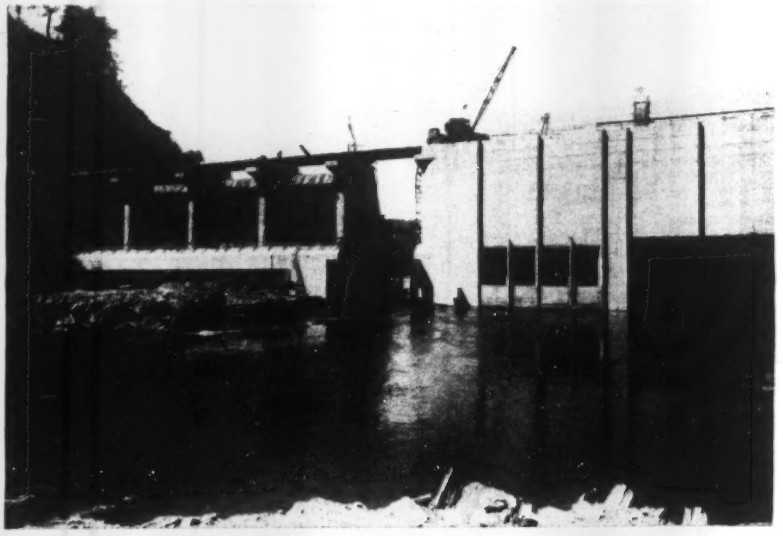
Alternative bids also will be taken on taxiways, but the apron, 5,288 x 1,082 ft will be a 14-in concrete slab only. About 3,800,000 cu yd of earthwork is called for in the airfield area.

Fueling facilities will include a 20,000-bbl gasoline storage tank and two 30,000-bbl jet-fuel tanks at a rail siding; also intermediate storage for 7,200 bbl of gasoline and 21,000 bbl of jet fuel; and pumping, piping and hydrant facilities for fueling and defueling planes. About seven miles of pipelines are included.

There are to be 12 major buildings: base operations, base maintenance shop, base maintenance hangar, central heating plant, crash and fire station, communications, troop supply warehouse, cold storage warehouse, remote receiver building, remote transmitter building, and two multi-purpose aircraft maintenance docks. The docks will be of double cantilever steel construction with clear door opening of 293 ft. Base maintenance hangar will be of similar design, with 540-ft wide door opening and low-temperature radiant heating floor panels. Troop supply warehouse will have 101,000 sq ft of floor area. There also will be airmen's dormitories and mess halls. Pile foundations will support the heavier buildings.

Plattsburg Barracks is one of the United States' older military installations, having been established in 1812, in time to play a key role in the final stages of the nation's last conflict with the British. By 1892, it reached its present size, 700 acres, and since that time it has been well-known in the Northeast, first as a training ground for civilian troops (National Guard and C.M.T.C.) and more recently as a college campus. After World War II New York State took over the Plattsburg property, establishing Champlain College there, one of the units of an emergency post-war scheme for higher education. The urgent need for Champlain College now has passed and the state has reconveyed the property to the United States.

Facilities in the project that is about to begin will accommodate a medium bomb wing of the Strategic Air Command. Design has been accomplished by a co-venture of engineers Seelye, Stevenson, Value and Knecht, New York, and architects Shreve, Lamb and Harmon, New York.



FORT PATRICK HENRY DAM—Low block diversion opening awaits bulkhead so concreting can be completed while waters go through temporary sluiceway just below water level at right of gap.

TVA modifies usual closure method

Closure operations are nearing completion on TVA's $15-million Fort Patrick Henry Dam on the south fork of the Holston River near Kingsport, Tenn., with impounding of a 10.4-mi long lake scheduled to begin late this month.

Because of the narrow dam site, usual TVA closure practices have been modified.

During second-stage construction at other TVA dams, the river has been diverted through permanent sluiceways until the dam was completed. But, in this case, TVA engineers built a temporary sluiceway at a level lower than that of the permanent sluiceways. Then, during low river flow, a bulkhead was placed across the spillway gap to permit its concreting. The temporary sluiceway now is handling flows. As a final operation, the temporary sluiceway will be closed.

Boone Dam, eight miles away, is controlling the flow of the river during this final month of construction.

Work on Fort Patrick Henry Dam was started in May, 1951. The dam is 740 ft long and 95 ft high. The lake, with a 30-mi shoreline, will have a surface area of 980 acres when water is at spillway elevation.

Two generators with a combined capacity of 36,000 kw are being installed and the first of these will be completed in November. Meanwhile, all generating units at the Boone Dam are now in commercial operation.

Korean construction

$100 million to be spent in next three years

Steps toward implementing a South Korean reconstruction program are being taken slowly but it appears that at least $100 million in construction contracts will be placed with U.S. and other foreign firms in the next three years.

Army Engineers, are now supervising urgent reconstruction of roads and bridges. And, United Nations Korean Reconstruction Agency has Knappen, Tippetts, Abbett and McCarthy, New York consulting engineers, making engineering surveys in connection with a long-range rehabilitation program (ENR May 7, p. 23).

• **First UNKRA awards are due**—Most of whatever actual reconstruction is done in the next year at least will continue to be handled by UNKRA. It has a fiscal '54 budget of $130 million, but a good part of this will go for relief. FOA's role, at present, is to help bolster the Korean economy. It will spend $200 million, appropriated by Congress, to try to stave off inflation by purchase of consumer goods.

First construction contracts, which will be awarded shortly, will be for rehabilitation of 17 power stations at an estimated cost of $3.6 million. The Korean Civil Assistance Command, a U.S. Army agency, will let the contracts for UNKRA. Altogether $10 million will be spent on power rehabilitation, about half of it for repair of the Hwachon hydro plant just north of the 38th parallel.

The Korean Prime Minister's Office of Planning estimates that these repairs will raise Korean power generation to 120,000 kw, but twice that amount of power will be needed by 1957. The Office of Planning seeks to construct six new power plants within the next three years at a cost of $20 million in foreign contracts.

• **Planned projects**—Other construction projects called for by UNKRA and the Office of Planning include: $8 million for building a new and repairing an old cement plant; $8 million for rehabilitating two chemical fertilizer plants and $35 million for building a new one; $20 million for extension and repair of railways, and $35 million for reconstruction of harbor and port facilities.

The entire Korean aid program, including relief, economic assistance and reconstruction, will amount to about $1.5 billion, with the U.S. tentatively pledging about $1 billion.

LABOR

Davis-Bacon application hit

The long fight between general and specialty contractors has—in one phase—settled down into trench warfare. The trenches are those in which sewers and other piping are laid near buildings built with federal aid. And the warfare centers about who should install the piping: plumbers or pipelayers.

General contractors and some government procurement agencies complain that the Labor Department has been applying the Davis-Bacon Law improperly. More specifically, they hint that during the nine months when Martin P. Durkin, president of the AFL Plumbers and Steamfitters Unions, was Secretary of Labor, Davis-Bacon ruling were made in several areas which resulted in pipelaying assignments being given plumbers.

Under Davis-Bacon, contractors on federal projects are required to pay prevailing wages as determined by the Department of Labor and to observe prevailing local practices in assigning work to particular crafts. General contractors try to use semi-skilled pipelayers as much as possible not only for the saving in cost through lower wages but also to avoid having to bring in a plumbing subcontractor, which puts the cost still higher. Plumbing contractors, naturally, stand to get more of the business and in this respect have the support of the plumbers union, whose members would be employed in most cases.

• **Case in point**—The day after Durkin became Secretary of Labor last January, the Labor Dept. ordered the contractor building the West Dallas, Tex., housing project to more than double the wages being paid men laying underground pipes, ENGINEERING NEWS-RECORD has learned.

Durkin, who resigned Sept. 10 over Taft-Hartley differences with President Eisenhower, had just taken leave from his position as plumbers president.

An order, dated Jan. 21 and signed by Assistant Secretary of Labor Ralph Wright as "Acting Secretary," stated that the pipelaying should be done by plumbers instead of semi-skilled pipelayers, and that the pay, therefore, should be $2.61 instead of $1.25 an hour.

The decision was based on a finding that it was the "prevailing practice" in the West Dallas area for plumbers to do this type of work, not pipelayers. It reversed an earlier decision, issued in the summer of 1952, approving the use of pipelayers at the lower rate of pay. The AFL Building Trades Council had protested this decision and got the Labor Dept. to change it. It was learned that the former Secretary, the late Maurice J. Tobin, had refused to change the decision because it was in effect deciding a jurisdictional question. Wright is now working for the international labor organization in Washington.

The Public Housing Administration is protesting Wright's ruling. The job is a $37 million public housing project of 3,500 dwelling units for the Dallas Housing Authority.

The West Dallas situation is one of several in which it is charged that the contractors used lower-paid pipelayers for laying sewers and other piping outside the building line in violation of the common practice of using higher-paid plumbers. Use of master plumbers for work inside a structure is not at issue.

• **AGC in picture**—Many of the complaints against the Labor Dept. stem from chapters of the Associated General Contractors, whose members are general contractors. Some employ non-union labor

Other projects involving this issue:

• **Miami International Airport**—Lloyd A. Mashburn, who resigned as Acting Secretary of Labor on Oct. 9, ruled in June that the laying of water, drainage and sewerlines within the airport boundaries must be done by master plumbers because that has been the local practice. A Labor Dept. source said this is also required by local ordinance requiring the use of master plumbers for laying pipe inside a property line. This was denied by a spokesman for the Civil Aeronautics Administration, which is involved because of federal airport aid. Mashburn, a former AFL Building Trades official who is now assistant president of the AFL lathers union, was then Undersecretary of Labor. Durkin had assigned him responsibilty for Davis-Bacon wage determinations.

Mashburn's ruling meant that the contractor, W. T. Price Co., had to pay semi-skilled pipelayers, who were getting $1.30 and $1.55 an hour, the higher plumbers' wage of $3 an hour, retroactively to the time work began. The higher wage is now being paid

under protest, with hope that Mashburn's decision can be reversed. There is no legal appeal from it.

Pipelayers were used on other similar projects at the same airport and these were cited as proof that it is the prevailing practice to use pipelayers, not plumbers but the Labor Dept. will not consider any practice which was illegal—if it was—as evidence of a prevailing practice in rendering a decision. These jobs at the airport have been completed and the money paid to the contractors, so the government has no way to reach them.

• **Miami area**—A Labor Dept. referee has held hearings in an effort to determine what is the prevailing practice with regard to type of labor used in laying pipe in the Miami area outside the airport boundary. Several federal projects will be affected. His decision is pending.

• **Air Force Base at Dover, Del.**—Installation of metallic water and sewer pipe for the Corps of Engineers has almost been completed. The contractor on this $500,000 project—Pleasanton & Edgell—has been using pipelayers since work began last fall in accordance with what he believes to be the local custom. In January the Labor Dept. received a complaint that the contractor was violating custom and should employ plumbers, instead of pipelayers. Plumbers' pay is $2.75 an hour, about twice that paid pipelayers. Investigation of the complaint is still in process.

• **Fort Eustis, Warwick, Va.**—This Army Transportation Corps headquarters covers eight sq. mi. A sewage treatment plant and a 12 in. water main are under construction. Service connections to various buildings under construction and a large sewer job involving the installation of vitrified pipe are part of the construction program. Here Mashburn, as Acting Secretary of Labor after Durkin's resignation, decided against the plumbers that it is the prevailing practice in the area of Fort Eustis to employ pipelayers, yarners and caulkers in the installation of piping, with the exception of welded and service connection piping.

• **Corpus Christi, Tex.**—A hearing was held last week in Corpus Christi before a Davis-Bacon examiner at which the Navy, the AGC and the plumbers union testified.

Dispute concerns a $300,000 contract, let in April 1952, for additions to water and sewer lines of the Navy's Corpus Christi Air Station. As let, the contract included Davis-Bacon determinations assigning clay and concrete pipe work to the semi-skilled pipelayers.

However, some cast iron pipe was involved, so the contractor received from the Navy an additional classification under Davis-Bacon to permit pipelayers to put down cast iron pipe. Nothing happened until last spring, when the plumbers at Corpus Christi protested to the Navy and to the Labor Dept. that plumbers' rates should be paid for metallic pipe work.

No settlement is due for a couple of months. Meanwhile, the Navy is holding back some of the contractor's money, federal custom when Davis-Bacon disputes arise.

• **Court review possible**—Contractors hope the new secretary of Labor James P. Mitchell, will do something about their troubles. If he doesn't, and possibly in any event, agitation will be renewed at the next session of Congress to make the Davis-Bacon determinations subject to court review.

At his press conference following announcement of his appointment, Mitchell would not discuss the Davis-Bacon Law. As Assistant Secretary of the Army in charge of manpower and reserve officers' affairs—a post Mitchell held from May 1 until Eisenhower tapped him for the cabinet—he has not been involved directly in Davis-Bacon matters, Mitchell said.

The week at Joppa

A federal court this week tried its hand at ending a month-old "blockade" by ironworkers which has prevented resumption of construction at the strike-harassed Joppa, Ill., power plant being built to supply half of the electricity for the Paducah, Ky., atomic energy factory.

A U. S. district court at East St. Louis, Ill., granted a request by Bechtel Corp., new contractor for the Joppa plant, for a temporary order restraining 33 ironworkers who left their jobs with Bechtel in a tiff over Bechtel's right to hand-pick ironworkers.

There was little hope among observers in the Joppa area that the order would accomplish its purpose, and there was considerable speculation as to what ingenious form picketing of the road to Joppa would take to avoid violation of the letter of the order.

Meanwhile, at Shawnee, Ill., a third generator went on the line at a sister power plant being built by TVA, and construction of a fourth was well under way.

Wide World photo

James Mitchell

New Labor Secretary liked by building trades

President Eisenhower got another expert in construction labor problems to head the Department of Labor when he picked James Paul Mitchell of New Jersey to succeed Martin P. Durkin, who has returned to the presidency of the AFL plumbers & steamfitters.

Most of the new secretary's labor relations experience has been in manufacturing (Western Electric) and department stores (Macy's and Bloomingdale's), but it was handling labor problems for the Corps of Engineers that sent Mitchell to Washington for the first time some 13 years ago. He went to the Pentagon with Gen. Brehon B. Somervell when the latter took over Army construction.

Early in the mobilization period Mitchell helped negotiate an agreement between the AFL Building and Construction Trades Dept. and the federal government, providing for uniform working conditions for building trades workers on federal construction projects. The National Building Trades Stabilization Board was set up to administer this agreement and Mitchell served as the government's representative from 1940 to 1943. Sitting with Mitchell on that board were Richard J. Gray, then AFL building trades vice president (now president), and Prof. J. Douglas Brown of Princeton University, neutral chairman.

The Reader AUDITED PAID ABC CIRCULATION *His Mark*

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The Audit Bureau of Circulations is a voluntary, non-profit, cooperative association. It was founded in 1914 and now consists of 3450 advertisers, advertising agencies and publishers in the United States and Canada. This magazine is proud to be a member.

ABC originally was set up to help take the racket out of publishing, to eliminate the waste and guesswork then so prevalent in publishing and advertising, to establish order and confidence in place of the misunderstanding and misrepresentation that arose from unverified circulation claims and dubious circulation practices. Its mission was to protect the interests of both readers and advertisers.

THIS IT DID by first defining the term "paid circulation." Then it established standards and rules to govern subscription sales practices and records. Finally it set up an auditing organization to verify the claims and report the facts concerning the circulation of each member publication. It now maintains on that job a working staff of sixty-five full-time auditors. So the ABC symbol has become the hallmark of circulation standards and advertising values. Each member publication must maintain those standards if it wishes to retain its membership and display the ABC symbol.

This ABC audit is no perfunctory affair. When a business publication, such as this one, becomes a member of the Bureau, it agrees that the auditors shall have "the right of access to all books and records." Their inspection, therefore, may cover any part of its operations. Original subscription orders, payments from subscribers, paper purchases, postal receipts, arrears of payments, and many more items are painstakingly checked by the auditors. In many instances they go behind the records to seek verification from subscribers themselves as to the terms of their subscriptions.

IN DOING ITS JOB, ABC has created many values for both publishers and readers as well as for advertisers. That is because the publication that becomes a member of ABC thereby offers the strongest possible guarantee of its primary devotion to the interests of its readers. The function of a business magazine is to be useful to its readers. When this service is rendered by an ABC publication, it is constantly subject to the practical test of reader acceptance and approval. As each subscriber has the right to purchase or refrain from purchasing an ABC publication, that collective right confers upon the readers the power to say whether or not the publication will survive. Thus the report on its ABC audit provides the most direct assurance that a publication stays in business only because of a voluntary demand by readers who find its editorial service responsive to their needs.

Naturally, the editor of each business publication follows closely the score thus racked up by his paper in its ABC reports. In the scope and tone of his editorial coverage and treatment, in the selection and presentation of his editorial content, he must constantly labor to maintain and enhance the readers' acceptance of his efforts. That is why the editorial standards established by ABC publications set the editorial standards for all publishing. That is how the ABC constantly stimulates its member publications to become even more useful to their readers.

AND THAT IS WHY the ABC symbol has become the Mark of the Reader, a constant reminder that his willingness to pay for an ABC publication is the acid test of its value both to him and to its advertisers.

McGraw-Hill Publishing Company

STEEL FRAME of 50-ft wide building for Bonneville Power Administration to be aided by concrete walls in resisting seismic forces.

Welded building, two bays wide, designed to resist seismic loads

Steel erection is completed and finish work is under way in Portland, Ore., in an all-welded, eight story building that, is only 50 ft wide but is designed to resist earthquake forces.

The structure is being built by the Lloyd Corp., Ltd. (a real estate investment firm) for leasing as headquarters of the Bonneville Power Administration.

The 360-ft long building has 24-ft bays in the long dimension and two 25-ft bays in the width. A 54-ft wide elevator, stairwell and utility core extends 24 ft out from the center of the long side.

At one end, forming an L with the eight story building is a two-story special purpose wing 199x72 ft in plan that will contain an auditorium, cafeteria, a load dispatcher's headquarters, and a system analyzer laboratory. And under the structure, as well as under open areas of the two-block site is a 199x454-ft basement that will be used for garage, reproduction shop and storage purposes. The special purpose units are, in general, structurally independent of the eight-story building itself.

• **Seismic resistance**—Designing seismic resistance into the eight-story structure, particularly in the long dimension, proved to be surprisingly simple:

Reinforced concrete floors, 3½ in. thick, serve as horizontal diaphragms to distribute the earthquake load. These floor diaphragms transmit load to solid 8-in. thick concrete shear walls at the steel-framed utility-elevator tower. This unit in turn transmits the forces to foundations.

Seismic forces are based on the requirements for Zone 2 as specified in the Pacific Coast Building Officials Conference Code. Earthquake forces govern design even when compared with a 20-psf wind load against the 360-ft face of the building.

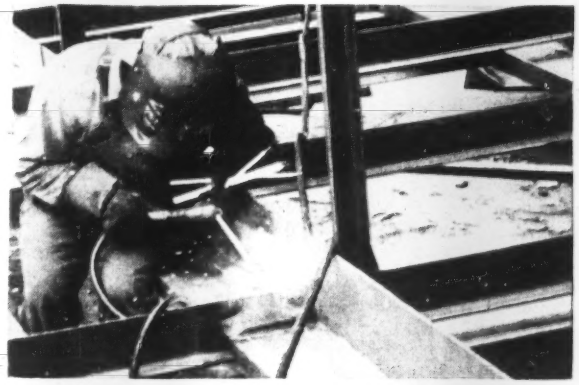
To make sure that lateral forces are transmitted from the steel structure to the concrete walls, spiral-rod shear connectors are welded to important steel members.

• **Erection procedures**—Close tolerances specified for steel erection were met by careful sequencing of welds, by fabricating assemblies of steel members and by use of clips that permitted erection to precede welding operations.

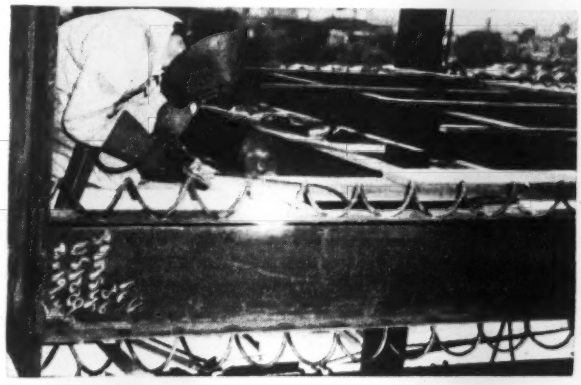
Weld sequencing was considered by the designers to be important in prevention of distortion. Where possible, therefore, welding was done simultaneously on opposite sides of a member.

If that were not possible, heat input was balanced by stage welding. For example, a weld on one side of a member might be only 60% completed. Then the weld on the opposite side would be fully made. And, finally, welding on the original side would be finished.

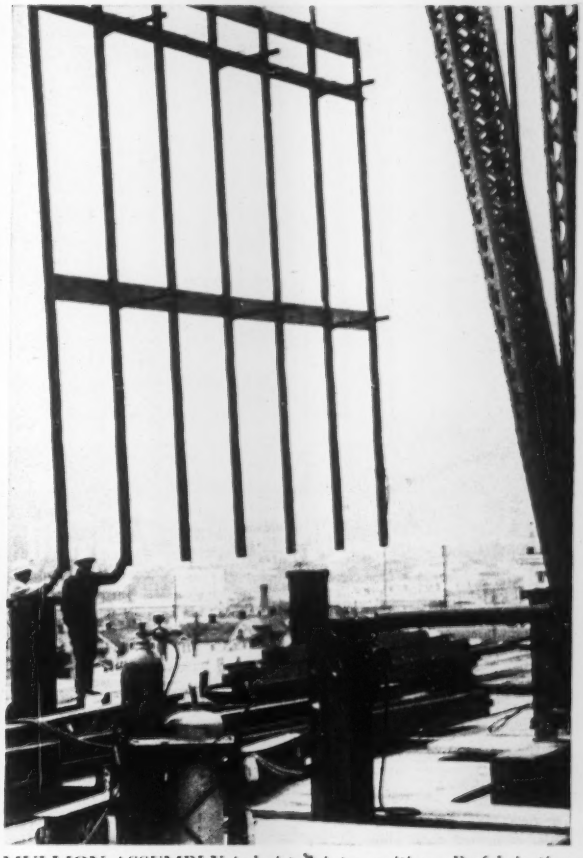
The 60% figure is not a fixed percentage. The amount of welding accomplished in the first step varies with the size of the member, the type of weld, where the weld is applied and



DOWN-HAND WELDING is used wherever possible on the all-welded structural frame. Workmen fabricate assemblies of exterior columns and beams in a ground-level jig.



SPIRAL RODS are welded to important horizontal members. Encased in concrete, these rods will facilitate transfer of lateral forces from floor slabs that act as a diaphragm to vertical walls.



MULLION ASSEMBLY is hoisted into position. Prefabrication of large assemblies helps control distortion induced in the frame by welding.

the amount of restraint. These must be carefully analyzed for each particular connection.

Pre-assembly of steel members also permitted control of welding distortion. For example, on this building, all possible welding was accomplished in the shop on columns before they were milled. As another example, exterior 6-in. T-mullions were fabricated seven at a time with their connecting 12-in. channels for a 2-story height. Ground-level jigs permitted this to be done rapidly, with most of the welding executed in a down-hand position.

(These mullions also serve as columns around the exterior of the building. Obviously, they are too light to be effective in resisting seismic forces and were not considered for this purpose in the design.)

Extensive use of a patented clip allowed erection to proceed well ahead of welding. These clips substituted in many places for erection bolts and provided substantial restraint to distortion. Because of the close tolerances, the steel fabricator—Isaacson Iron Works—carefully indicated clip positions on detail drawings so field crews would place them correctly.

Because the first-floor area can be used for stores, the T-mullions extend only from the second through eighth floors. A 48-in. girder incorporated in the design to pick up the wall loads at second-floor level.

• **Module system**—The floor plan is based on a 4-ft modular system to provide flexibility of office space. Partitions may be located at the T-mullions, which are spaced 4 ft apart, thereby providing for office widths in a multiple of 4 ft.

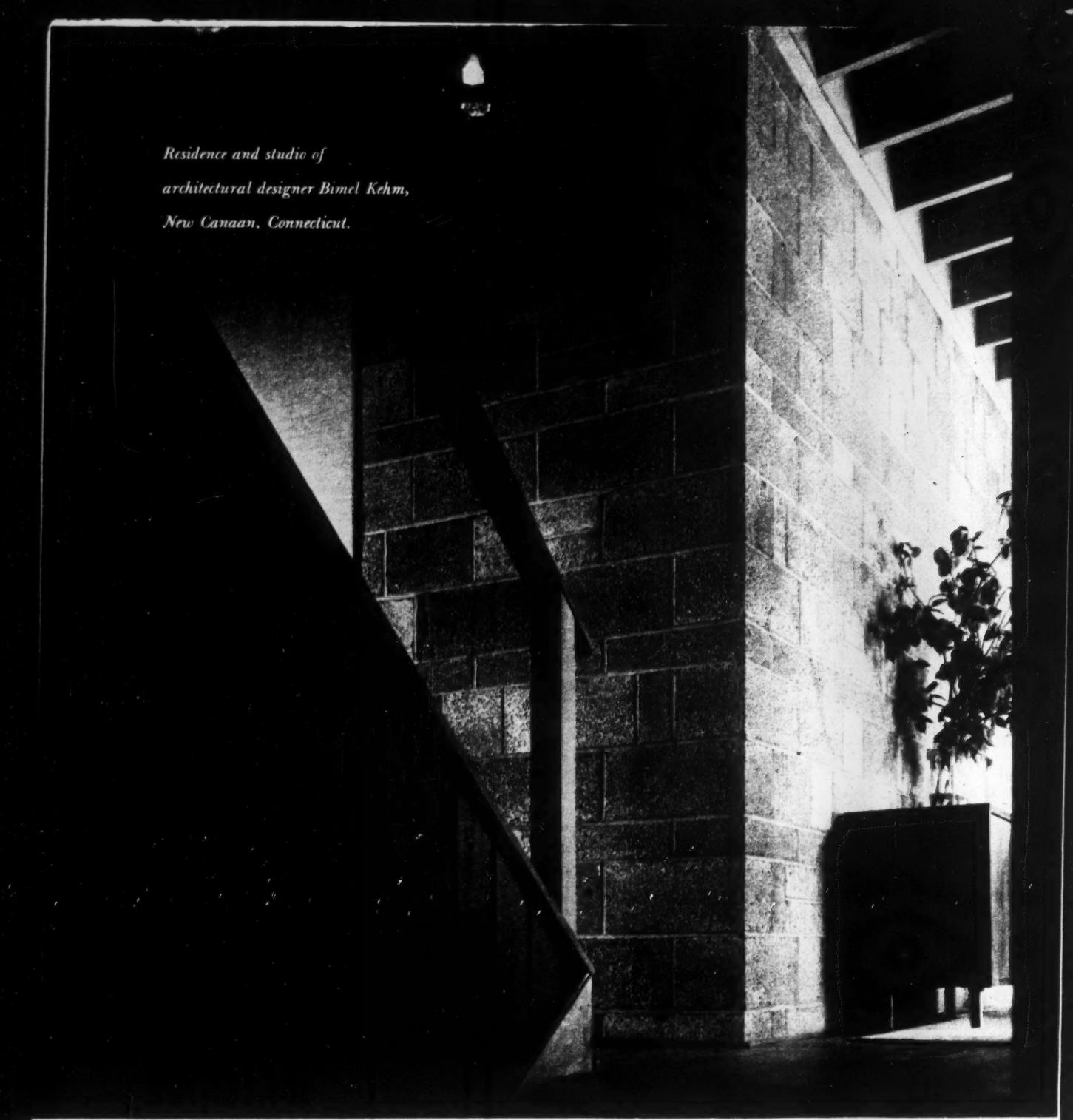
Inside and outside faces of the exterior walls are designed without projections. This simplifies exterior architectural finish and allows some 5,000 sq ft more of usable floor space since there are no large-size exterior columns.

Heating controls, lighting fixtures and telephone outlets are also planned for a 4-ft module. Individual heat controls are provided each 4-ft for the radiation units that form an integral part of the window sill and window finish.

Lighting in the office area is provided by fluorescent unit installations that are continuous across the width of the building and spaced on 4-ft centers. The units alternate between lighting fixtures and blank covers with fixtures and covers being interchangeable. The number of fluorescent lamps used in each fixture may be changed to give either 40 or 60 ft-c depending on the requirement for the area.

The Bonneville Power Administration will purchase and install partitions for its own use and these are movable types. The Portland City Building Code called for a masonry partition along the corridor. But in accordance with an appeal ruling, movable partitions that have passed a standard 1-hour fire test are now being substituted.

John Graham & Co. is the architect, with Prof. A. L. Miller, of the University of Washington, as a consultant on seismic design. Dean Wright, consulting architect for the Bonneville Power Administration, reviewed the building plans and construction for the government. Prof. Gil Schaller, of the University of Washington, was retained as consultant on welding procedure. General contractors on the work are Ralph & Horwitz of Portland.



Residence and studio of
architectural designer Bimel Kehm,
New Canaan, Connecticut.

More and more, people with discriminating taste and a knowledge of construction values are using exposed Waylite Masonry. It is remarkable for beauty . . . economy . . . thermal and acoustical properties.

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WAYLITE Masonry Units

TRANSMISSION LINE TOWERS DESTROYED BY TORNADO in Worcester County, Mass., on June 9, 1953, shortly after 5 p.m., indicate that peripheral winds approached 335 mph. In this artist's conception of damage done by the twister to power lines, lying just to the east of Worcester, note that tower pair number 3 was not blown down since it lay near the eye of the storm. Tree damage in this area, like building damage in the city, indicates that the path of the 40-mile-long tornado was about ½ mile wide at this point. The circumferential velocities in the drawing are minimums computed from the damage done to these towers whose design had been tested to destruction in 1928.

Worcester tornado velocities found through tower failures on powerline

Clyde A. Booker
Transmission Line Engineer
New England Power Service Co.
Boston, Mass.

Peripheral wind velocities up to 340 mph must have occurred in the tornado that ripped through Worcester, Mass., on June 9, 1953 (ENR, June 18 p. 21). The tornado advanced at a rate close to 35 mph and devastated a 40-mile strip ranging in width from 100 yards to a full half mile. Twenty minutes after the main storm had passed, a second less intense storm developed on a roughly parallel route about 10 miles to the south.

Damage to six particular electric transmission line towers in the main tornado's path, has enabled the author to compute minimum velocities that were necessary to do the damage to the towers.

Three pairs of towers, in a line of four, were blown down on a 115-kv transmission line running north and south on the east side of Worcester. Together, the four pairs of towers formed the basis for wind velocity computations, since their design had been tested to failure at their installation in 1928. (Tree damage adjacent to the transmission line right-of-way indicates that the tornado path was ½ mile wide at that point and that it struck almost at right angles to the transmission lines.)

Tower pair Nos. 1, 2, and 4 (starting from the south side of the tornado path) were knocked down while No. 3 pair remained standing. Rough measurements indicate that the center, or eye, of the storm passed just to the south of No. 3. The twister winds on the south side of the tornado path blew tower pairs 1 and 2 over to the east, and the winds on the north side blew No. 4 pair over to the west.

• **When the tower design** was tested in 1928, the test tower failed under a transverse load equivalent to 14,050 lb applied at the crossarm after making suitable allowance for the vertical loads present during tornadoes. By taking the adjusted, projected area at crossarm height of tower, ground wires and conductors, the pressure necessary to destroy tower No. 4 converts to 148 mph wind velocity at that point. A similar computation at tower No. 1 gives an average velocity of 170 mph. These velocities are the minimum average necessary to cause failure, since inspection after failure showed the footings and all other features of the towers to have been in perfect condition before the violence of the storm struck.

Since tower No. 3—near the eye of the storm—did not fail, and since the tree damage at the edge of the tornado path indicated a velocity not over 50 mph (the storm advanced at 35 mph), the author assumes that there was no peripheral velocity at the eye of the storm and at the edge. A profile of the minimum peripheral ground velocities taken through the eye of the storm and normal to its direction of advance (this will resemble a sine curve: zero at the edges of the storm and at the eye) shows that there must have been a peak velocity of from 260 to 270 mph on the north side of the tornado, and a velocity ranging from 330 to 340 mph on the south side.

These values of velocity agree closely with the established rate of advance of the storm which was just about 35 mph. Checks on tension braces and strain on the conductors indicate that winds could not have exceeded 375 mph.

Photo by Stuvel

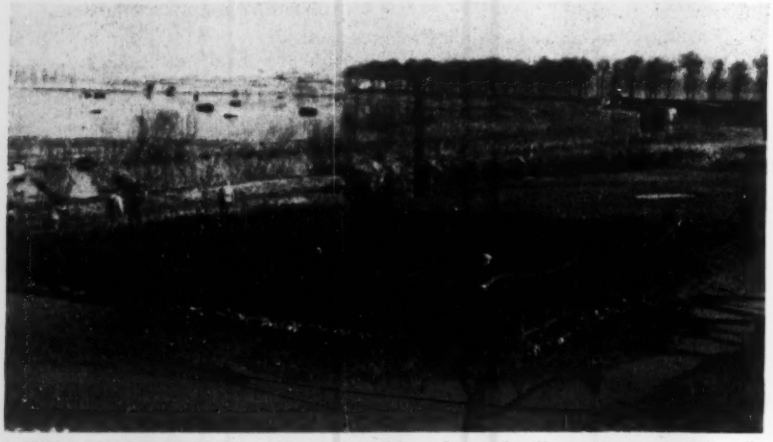
GAP IN THE DIKE AT KRUININGEN on the island of Zaid Beveland was one of the four major seawall breaks. Seagoing crane placed rock and clay fill from barge to seal this break. One-half of the Netherlands would be under water or flooded at high tide without the 2,000 miles of dikes and protective dunes. Some 7,000 men and scores of dredges, cranes, draglines, tugs, and barges are now employed, and will be through next year, in dike repair work necessitated by the flood.

Lowlanders repair defenses against the sea

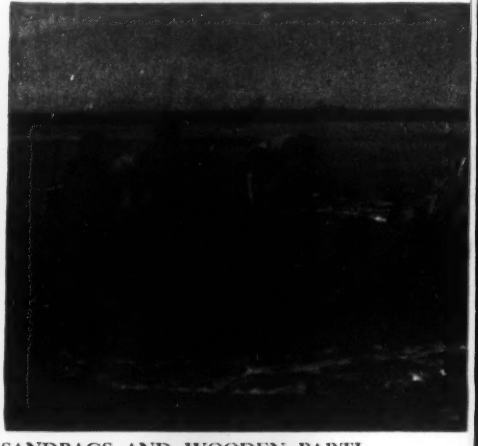
Hardest hit by the tidal flood of Feb. 1 last (ENR Feb. 12, p. 47) the southwest coast of the Netherlands suffered another attack by the sea when a spring tide smashed through a major dike on the island of Schouwen-Duiveland last month. The new 300-ft break in the island's defenses threatened to submerge the area again.

The damage caused by the February flood in England for the most part has been repaired. But there are four principal gaps left in Holland's dikes. Three of these are on hard-hit Schouwen-Duiveland Island. The largest break is 1,500 ft wide and 100 ft deep in places, contributing greatly to the fact that the island is still three-quarters under water.

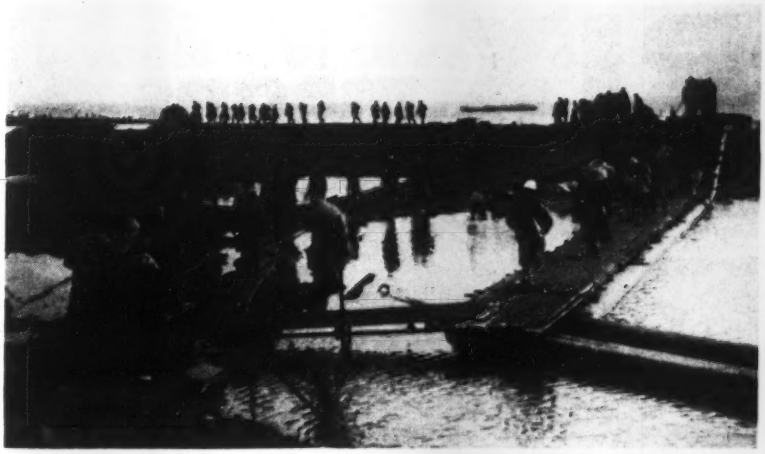
The plan advanced by the Dutch government last February to construct dikes all along the seaward reaches of the Netherland's southwest and northern shores (ENR Feb. 26, p. 48) is still in talk stages. However, estimates show that it would take 12 years to carry out the scheme and cost $125-150-million. At the moment all the men and equipment that can be provided for in the emergency areas are at work repairing the breaks made last February. This year $100 million is being spent on reconstruction, and an equivalent amount will be spent next year to put the Netherlands back to its pre-flood condition.



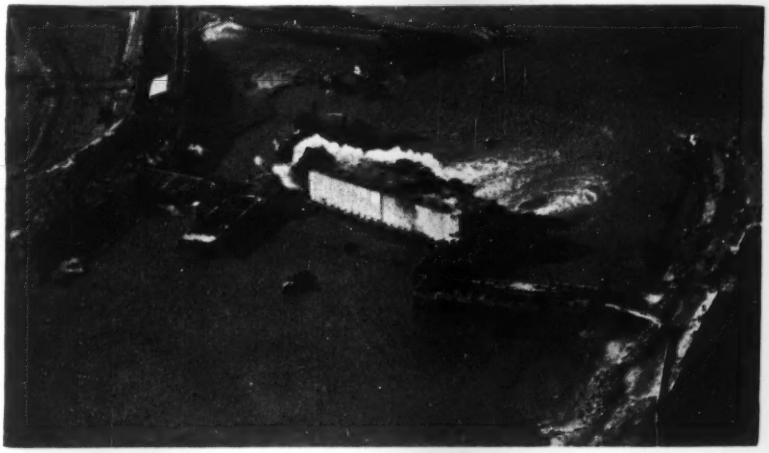
A WILLOW MATTRESS, made of plaited branches and willow whips, is traditionally used in the low countries as the base on which a sunken pontoon rests in a dike gap. Without the mattress to hold the sea floor, sunken pontoons could be washed out.



SANDBAGS AND WOODEN PARTITIONS were used to form "pressure quays" into which sand was pumped to



SANDBAGGING a number of the 1,200 breaks in 1,000 miles of flood-affected British coastline saved many danger-spots in Britain from the tidal flood. About 6,000 men are now completing $45-million worth of flood-repair work on English seawalls many of which are of reinforced concrete construction.



200-FT CONCRETE CAISSON was pushed by tugs into Zuid Beveland dike gap at low tide and immediately sunk before the tide could turn and raise the water level over the land to be reclaimed. River water will flush salt water (let out through gates at low tide) from land. Water below low-tide level eventually will be pumped out.

Photo by Stuvel

fill break in seawall. Two weeks before the successful conclusion of this job a flood tide destroyed the work of 48 hours in a few minutes. In all, 300 miles of gaps had to be repaired in Dutch dikes after the February flood.

Pressure-Creosoted Piles

● Approximately 139,400 linear feet of pressure-creosoted piles were used in the foundation of Breukelen Houses, a Federal Aid housing project constructed by the New York City Housing Authority.

Ten of the project's thirty apartment buildings were located on filled-in ground over old water courses. Pressure-creosoted piles were considered the most practicable type of foundation for these 6- and 7-story structures. Over 3,100 25-ton capacity piles, ranging in length from 27 to 64 feet, were used at a cost of $261,758.00—a very reasonable cost for permanent piles.

The Breukelen project, covering a total area of 64.9 acres, will house 1,595 families. The Horn Construction Co., Inc., of New York City, was general contractor for foundations. The piles were driven by I. B. Miller Contracting Corporation of Queens. Severud-Elstad-Krueger of New York City were structural engineering consultants.

Koppers Pressure-Creosoted Foundation Piles are considered permanent construction when cut off above the water table, and the tops saturated with creosote and capped in concrete. For information on price and delivery, please write to:

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Wood Preserving Division
Pittsburgh 19, Pennsylvania

KOPPERS **PRESSURE-TREATED WOOD**

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MANSFIELD, LOUISIANA

Inventory of sewage disposal facilities—1953

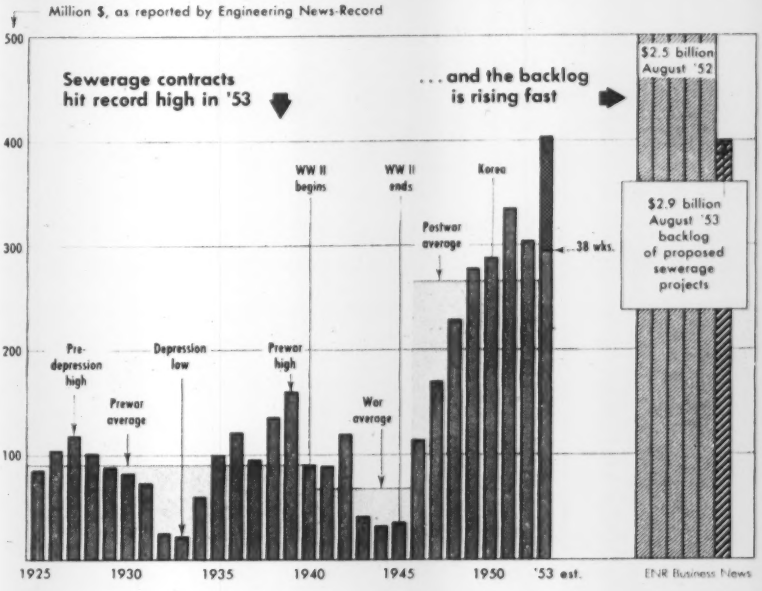
Postwar America has seen a boom in sewerage construction. The statistical picture at the right can leave no doubt of that. Since 1945, dollar volume of sewerage contracts has averaged increases of about 30% a year, despite the effect of Korea and its repercussions.

This year, this vital segment of the construction industry is running well over 30% ahead of last year, and heading into the stretch at a rate seemed due to better $400 million for 12 months.

The postwar boom that has seen some $2 billion spent on sewerage has meant a big change in the facilities that dispose of the nation's liquid domestic wastes. To inventory these facilities, ENGINEERING NEWS-RECORD once again has gone to the state sanitary engineers for a survey patterned after those made in 1935, 1938 and most recently in 1945 (ENR Nov. 14, 1946, p 112). Data on industrial wastes facilities were collected, too. These will be presented in a subsequent issue.

Cooperating officials of the state agencies concerned with sanitary engineering are named below. Without their interest and help, the inventory (result tabulated on the next two pages) would not have been possible.

Forty-five states and the District of Columbia responded with information in a form for tabulation. In the three cases where no information was made available, and those where replies were not readily converted to the tabular form, footnotes have been inserted. The entire table should be read with its footnotes, and with the realization that even this best official information available can not give the exact up-to-the-minute picture of such a fast moving subject as is this one.



Scores of conclusions, both general and specific, can be drawn from the data provided. In general, the postwar boom in sewerage construction has meant, since 1945:

- 10% more people served by sanitary sewers.
- 22% more people served by sewage treatment plants.
- 14% more places served by public water supplies.
- 30% more places served by sewage treatment plants.

This progress is impressive for a period of eight years; but impressive too, is the job yet to be done. Dollarwise, there now exists, as proposed projects reported to ENR, $2.9 billion worth of sewerage work to be done. This is nearly a billion worth more than was let to contract in the 1945-53 period now surveyed. And while some $400 million worth of sewerage is expected to be let to contract this year, a nearly equal amount was added to the backlog in only the first eight months.

Here are just a few of the countless specific conclusions that could be drawn to indicate trends in sewage treatment practice since 1945:

A diminishing proportion of existing plants provides only primary treatment; a slowly mounting percentage affords complete, secondary treatment. About 50% more communities chlorinate effluent now that did in 1945. There are 15% more Imhoff tanks now, but their rate of growth is diminishing. There are 26% more trickling filters than there were 8 years ago, and over 25% existing are high-rate. Separate sludge digestion has increased al-

State officials of health departments and other agencies who supplied data

Arthur N. Beck	Alabama	**L. E. Ordelheide**	Missouri
George W. Marx	Arizona	**Claiborne W. Brinck**	Montana
F. L. McDonald	Arkansas	**T. A. Filipi**	Nebraska
William N. Gahr	Colorado	**W. W. White**	Nevada
Warren J. Scott	Connecticut	**Francis J. Lariviere**	New Hampshire
David V. Auld	D. C.	**Robert S. Shaw**	New Jersey
Donald K. Harmeson	Delaware	**Robert P. Lowe**	New Mexico
David B. Lee	Florida	**Earl Devendorf**	New York
W. H. Weir	Georgia	**J. M. Jarrett**	North Carolina
H. C. Clare	Idaho	**Jerome H. Svore**	North Dakota
C. W. Klassen & W. H. Trinkaus	Illinois	**Harold L. Malone**	Oklahoma
B. A. Poole	Indiana	**C. M. Everts, Jr.**	Oregon
P. J. Houser	Iowa	**J. R. Hoffert**	Pennsylvania
Dwight F. Metzler	Kansas	**Walter J. Shea**	Rhode Island
Louis F. Birkel	Kentucky	**J. H. Stephens**	South Carolina
J. H. O'Neill & F. J. Coogan	Louisiana	**Charles E. Carl**	South Dakota
E. W. Campbell	Maine	**R. P. Farrell**	Tennessee
George L. Hall	Maryland	**V. M. Ehlers**	Texas
C. I. Sterling, Jr.	Massachusetts	**Lynn M. Thatcher**	Utah
Donald M. Pierce	Michigan	**Edward L. Tracy**	Vermont
F. L. Woodward	Minnesota	**E. C. Jensen & E. F. Eldridge**	Washington
H. A. Kroeze & W. G. Spence	Mississippi	**H. K. Gidley**	West Virginia
		O. J. Muegge	Wisconsin
		L. O. Williams	Wyoming

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$227,083 PRIZE!

(with new low score!)

By Mr. Friendly

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The Acushnet Process Company of New Bedford, Mass., famous manufacturer of golf balls and molded rubber products.

Record:

They've played ball with American Mutual, and we've played ball with them for 17 pleasant, profitable years.

New low score:

We worked together to reduce the score of costly accidents to way below par for their field, and saved $188,271 through lower premiums in the past 8 years alone!

Additional prize:

They also saved $38,812 through dividends in 8 years.

Total winnings: $227,083.

Moral: If you're interested in a service that can help reduce accidents and premiums to record lows . . . and keep you out of dangerous traps and costly hazards, write American Mutual Liability Insurance Company for the complete case of The Acushnet Process Co. Address: Dpt. 0-123, 142 Berkeley St., Boston 16, Massachusetts.

© 1953 AMERICAN MUTUAL LIABILITY INSURANCE COMPANY

Inventory of Sewage

Compiled by *Engineering* state sanitary engine

State	Population (Thousands, 000 omitted)				1950 — U. S. Census		Communities Served by Public Water Supplies	Communities With Sewerage Facilities				Ownership Other Than Municipal					Degree of Treatment — Number of Communities Whose Treatment Ends With							
																	Sewage Farm or Land Disposal		Screening		Primary Treatment Sedimentation Through Sludge Disp.		Oxidation Including Sludge Disp.	
	Total in Incorp. Places (Urban & Rural) 1950	Included in Sanitary Districts	Served by Sanitary Sewers	Served by Treatment Plants	Incorporated Places Urban & Rural	Sanitary Districts		Separate Sanitary Sewers	Combined Storm and Sanitary Sewers	Storm Sewers Only	Sewage Treatment Plants	Privately Owned Public Sewerage Systems	Sanitary Districts or Authorities	Sewage Works at Industrial Plants	State & County Inst.	Federal	Number Financed by Sewage Service Charges	Without Disinfection	With Disinfection	Without Disinfection	With Disinfection	Without Disinfection	With Disinfection	Without Disinfection	With
New England																									
Me.	892	70	395	36	433	9	219	47	76		31	12	9	..	6	5	12	1	0	1	0	28	1	2	
N. H.	300	0	310	75	..	0	126	..	65	..	12	0	0	0	2	0	..	..	..	..	..	..	8	1	
Vt.	139	0	196	39	312	0	172	30	75	..	12	31	0	1	3	..	..	..	..	..	..	2	6	..	
Mass.	4,691	2,086	4,128	2,007	351	4	273	..	..	..	74	1	3	1	26	5	..	..	..	4	0	32	23	28	
R. I.	792	141	553	447	39	1	61	19	4	..	20	0	1	0	5	2	1	0	0	0	0	1	6	4	
Conn.	2,007	227	1,335	1,246	169	1[1]	116	50	21	..	51	11	2	14	18	14	0	0	0	2	0	16	16[2]	11	
Total	**8,821**	**2,524**	**6,917**	**3,850**	**1,304**	**15**	**967**	**146**	**241**		**200**	**55**	**15**	**16**	**60**	**26**	**13**	**1**		**7**	..	**79**	**60**	**46**	
Middle Atlantic																									
N. Y.	12,259	..	12,373	8,200	611	0	1,501	376	85	..	360[3]	0	164[4]	..	40	22	5	0	0	3	31	72	109	19	
N. J.	4,835	1,864	3,700	3,050	567	10	466	..	266[5]	..	255	19	28	24	12	14	..	2	0	1	2	34	80	13	
Pa.	7,166	..	6,000	2,100	..	..	1,026	..	..	..	397	25	59	..	49	9	..	..	..	..	..	37	64	9	1
Md.	1,616	550	1,650	1,600	149	1	232	95	6	0	104	4	4	5	13	23	..	0	0	0	2	18	33	17	
Del.	178	..	210	32	51	14	42	17	8	2	13	0	14	3	6	3	0	0	0	0	0	1	8	3	
D. C.	802	802	802	802	1	..	1	½	½		1	..	..	..	..	..	..	..	..	..	..	1	..	..	
Total	**26,856**	**3,216**	**24,735**	**16,084**	**1,379**	**29**	**3,268**	**488**	**365**	**2**	**1,130**	**48**	**269**	**32**	**120**	**71**	**5**	**2**	..	**4**	**35**	**163**	**294**	**61**	**3**
Southern																									
Va.[1]	1,070	..	1,297	241	218	15	417	< 214 >		..	147	50	..	..	14	47	..	0	0	0	0	21	26	20	
W. Va.	803	0	487	87	214	0	502	185	91	0	50[3]	..	0	3	6	2	12	0	0	0	0	27	3	11	
N. Car.	1,544	43	1,270	890[3]	560	29	363	315	0	..	215	..	27	..	..	7	..	0	0	0	2	104	0	104	
S. Car.	748	62	892	560	239	7	219	162	0	0	119	39	7	28	7	5	12	0	0	0	5	107	0	9	
Ga.[2]	1,369	0	1,103	623	591	0	363	< 160 >		0	107	0	..	..	..	..	15	0	0	0	0	77	2	11	
Fla.	2,538	80	998	504	160	3	450	120[6]	1	..	86[6]	19	..	1	11	16	18	1	0	0	1	35	29	2	
Ala.	1,435	558	1,170	620	302	1	320[6]	207[12]	0	0	142	0	1	25	4	11	..	0	0	0	0	91	8	25	
Miss.	770	0	662	247	266	0	210	108	0	0	88	0	0	0	8	8	0	0	0	0	0	58	0	15	
La.	1,500	..	1,140	326	214	3	262	120	0	..	75	7	3	..	8	0	13	0	0	0	0	14	2	18	
Ky.	1,194	154	1,081	518	333	3	292[6]	..	141	0	75[6]	0	3	..	25	6	3	0	0	0	0	10	6	21	
Tenn.	1,407	1	1,309	252	..	1	240	115	3	..	77	8	..	13	11	6	..	0	0	0	0	51	4	17	
Total	**14,318**	**928**	**11,409**	**4,868**	**3,097**	**82**	**3,638**	**1,332**	**236**	..	**1,184**	**123**	**41**	**70**	**94**	**108**	**73**	**1**	..	..	**8**	**595**	**80**	**253**	**1**
								< 374 >																	
Middle West																									
Ohio[1]	5,109	..	5,060	3,230	872	159	547	271	79	121	201	0	..	..	14	6	121	0	0	0	0	67	10	119	
Ind.	2,535	742	2,405	1,652	537	5	381	71	199	0	106	0	5	50	20	18	65	0	0	0	0	18	5	59	
Ill.	7,147	5,290	6,738	6,252	1,157	36	786	270	176	..	375	4	36	29	22	7	157	0	0	0	0	54	12	281	
Wis.	2,226	20	2,185	2,024	550	55	473	343	44	..	301	1	38	1	17	0	120	6	0	0	0	64	50	174	
Mich.	4,174	0	..	..	..	0	600	285	235	..	195	10	0	14	34	6	..	2	0	1	1	55	60	43	
Total	**21,191**	**6,052**	**16,386**	**13,158**	**3,116**	**255**	**2,787**	**1,240**	**733**	**121**	**1,178**	**15**	**79**	**94**	**107**	**37**	**463**	**8**	..	**1**	**1**	**258**	**137**	**676**	
West of Mississippi																									
Minn.	2,025	905	1,835	1,575	803	1	534	354	10	..	256	0	1	0	8	3	..	0	0	0	0	81	19	42	
Iowa	1,698	15	1,512	1,080	935	3	640	368	16	..	295	1	3	37	10	1	75	1	0	0	0	38	0	250	
Mo.	2,433	165	1,906	385	715	25	365	252	28	..	206	0	0	1	10	10	23	0	0	0	0	65	1	0	
Ark.	815	0	650[6]	377[6]	419	0	205	164	0	..	142	2	0	13	15	3	0	0	0	0	0	90	3	35	
N. Dak.	332	0	277	221	348	0	137	..	..	2	105	0	0	0	2	0	45	0	0	0	0	66	0	16	
S. Dak.	347	0	316	265	305	0	225	123	11	..	119	0	0	6	12	14	0	2	0	0	0	54	1	52	
Neb.	846	100	594	374	529	7	420	223	3	..	147	1	1	0	6	5	33	0	0	0	0	147	0	57	
Kan.	1,305	35	1,203	880	605	9	421	264	5	..	219	0	9	1	8	15	23	0	0	0	0	19	0	204	
Okla.	1,364	12	1,157	1,005	525	3	350	231	0	0	208	0	3	..	19	21	..	0	0	0	0	64	0	128	
Tex.[8]	7,711	..	5,500	5,000	717	0	1,100	625	0	..	612	39	39	30	5	25	..	82	0	0	0	51	0	5	
Mont.	301	..	296	142	120	0	132	98	50	0	68	0	0	0	7	11	0	1	0	0	0	25	2	12	
Wyo.[2]	143	0	127	44	88	0	71	36	1	0	16	0	0	0	0	..	..	0	0	4	0	12	2	1	
Colo.[2][10]	727	16	603	600	247	5	186	41	1	1	36	2	..	..	2	9	12	0	0	0	0	< 57 >		< 30 >	
N. Mex.	362	0	315[6]	314[6]	73	0	162	84	0	0	83	7	0	6	3	15	54	0	0	0	0	18	0	48	
Total	**20,409**	**1,248**	**16,291**	**12,262**	**6,529**	**53**	**4,877**	**2,863**	**125**	**3**	**2,512**	**52**	**56**	**94**	**107**	**132**	**265**	**86**	..	**4**	..	**730**	**28**	**845**	**14**
																						< 57 >		< 30 >	
Far West																									
Idaho	322	0 150	229	120	188	1	220	66	14	0	45	5	0	..	3	4	0	0	0	0	1[9]	26	6	3	
Utah	533	13	228	51	199	1	292	79	12	0	22	3	1	15	1	1	2	1	0	0	0	12	1	0	
Ariz.	311	80	348	330	49	3	150	69	1	0	69	6	1	5	2	10	5	4	2	0	0	27[9]	1	17	
Nev.	102	0	125	114	32	0	59	34	10	4	26	15	0	7	1	6	3	12	0	0	0	20	1	7	
Wash.	1,500	77	1,369	605	244	27	560	115	58	2	130	27	27	..	10	7	..	8	..	..	..	6	47	..	
Ore.	858	5[6]	800[6]	554[6]	220[6]	..	560	113	45	1	114	13	3	2	4	17	7	7	1	0	0	31	22	12	
Calif.[1]	5,058	450	4,581	3,208	286	94	378	343	15	..	206	7	..	..	..	1	..	7	0	5	1	116	13	23	
Total	**8,684**	**775**	**7,680**	**4,982**	**1,218**	**135**	**2,219**	**819**	**155**	**7**	**612**	**76**	**32**	**29**	**21**	**46**	**17**	**39**	**3**	**5**	**2**	**238**	**91**	**62**	**14**
								< 374 >														< 57 >		< 30 >	
U. S. Total	**100,279**	**14,743**	**83,418**	**55,204**	**16,661**	**548**	**17,756**	**6,888**	**1,855**	**133**	**6,816**	**369**	**492**	**335**	**509**	**420**	**836**	**137**	**3**	**21**	**46**	**2,003**	**690**	**1,943**	**91**

[1] These states (Va., Ohio and Calif.) could not reply to questionnaire. Figures given are for 1945.
[2] These states (Ga., Wyo. and Colo.) replied with information not in form for insertion into table. Figures given are for 1945.
[3] Texas figures are for 1953 through Degree of Treatment, Screening. Rest of information received not in form for insertion; 1945 figures used.
[4] Plus some small sewer districts.
[5] Disinfection in summer only.
[6] 298 plants serve this number of communities.
[7] Town sewer districts, not true sanitary districts.
[8] Includes separate sanitary and combined.
[9] Includes 20 plants serving small tuna camps.
[10] Plus subdivision and institution installations.

Disposal Facilities—1953

News-Record with cooperation of
ers and health directors

Major Processes of Treatment Works
Number of Plants Using

Disinfection	Sewage Lagooning: Without Disinfection	Sewage Lagooning: With Disinfection	Primary Sedimentation: Coarse Screens	Primary Sedimentation: Grit Chambers	Primary Sedimentation: Fine Screens	Primary Sedimentation: Screenings Shredding Comminutors	Primary Sedimentation: Screenings Incineration	Primary Sedimentation: Grease Separation	Primary Sedimentation: Total Plants Without Coagulants	Primary Sedimentation: With Coagulants Flocc. & Clarif. Proc.	Primary Sedimentation: Mechanical Sludge Removal	Primary Sedimentation: Septic Tanks	Primary Sedimentation: Imhoff Tanks	Filtration: Contact Beds	Filtration: Standard Trickling Filters	Filtration: High-Rate Trickling Filters	Filtration: Intermittent Sand Filters	Activated Sludge: Diffused Air	Activated Sludge: Mechanical Aeration	Secondary Sedimentation	Chemical Precipitation	Chlorination	Disposal of Sludge: Separate Sludge Digestion	Disposal of Sludge: Sludge Drying Beds: Open	Disposal of Sludge: Sludge Drying Beds: Covered	Disposal of Sludge: Sludge Lagoons	Disposal of Sludge: Mechanical Dewatering	Disposal of Sludge: Incineration	Disposal of Sludge: Disposal at sea	Disposal of Sludge: By-Product Utilization: Fertilizer Production	Disposal of Sludge: By-Product Utilization: Gas for Heat	Disposal of Sludge: By-Product Utilization: Gas for Power
0	0	0	0	0	1	1	0	0	29	0	1	22	5	0	2	0	0	0	0	1	0	4	1	1	5	0	0	0	0	0	0	0
3				4					12		4		8		4					4		11	3	10	2						3	
			4	4		3		4	10	2	4	12	1				1	1		1		7	3	4			1			2	3	
5			48	7		15		3	52		19	1	13		9	1	25	1		11		22	12	36	6	1	1	1		1	6	2
8	1	0	20	8	0	6	0	2	17	0	9	4	4	0	3	0	3	4	0	7	0	12	8	7	2	2	3	2	0	3	6	1
6	0	0	47	31	4	23	1	0	87	0	36	32	16	0	5	3	25	3	0	12	1	47	30	43	19	6	14	5	0	2	24	1
2	1	0	119	54	5	48	1	9	207	2	73	71	47		23	4	57	8	1	36	1	103	57	101	34	9	19	8		8	42	4
4	0	0	155	136	14	60	5	3	277	4	123	19	106	1	48	19	17	12	2	70	0	214	118	138	100	15	20	4	8		80	11
1	0	0	7	7					198	21	63	56	60	3	50	5	37	9	2	124	21	146	81	77	67	6	11	5	3		18	
6											99	10	189	6	130	26	33	17	17		5	270	100			5	7	4	0			4
4	0	0	70	4	1	14	1	12	99	3	31	16	48	0	31	9	15	2	1	36	3	71	35	72	7	2	6	1	0	1	21	0
1	0	0	8	1	0	1	0	0	6	0	3	2	7	0	4	1	2	0	0	5	0	8	5	11	3	0	0	0	0	0	0	0
			1	1		1		1	1		1												1				1				1	1
6	0	0	241	149	15	76	6	16	581	28	320	103	410	10	263	60	104	40	22	235	29	709	340	208	177	28	45	14	11	1	120	18
	0	0	40	7	0	3	0	1	105	2	11	23	58	3	< 37 >		6	0		39		53	13	61	11	0	0	0		0	5	0
	0	0	9	3	0	6	0	0	50	0	6	31	13	0	8	0	0	0	4	11	0	12	6	17	4	0	0	0	0	0	0	0
	0	0	250	175	0	25	0	10	279	2	77	57	147	0	51	3	30	7	4	65	2	15	51	247	1	4	6	0	0		10	5
	0	0	63	22	0	17	0	4	176	0	15	77	66	0	17	14	5	0	8	20	1	9	31	90	0	6	0	0	0	2	8	1
	0	0	90	29	0	5	0	2	141	3	39	60	51	0	< 33 >		2	0	0	20		7	30	84	0	0	1	0		0	11	4
	1	0	49				0	0	87	1	47	31	9	0	5	12	2	2	2	18	1	52	47	46		0	3	0	0	47	4	2
	0	0	39	19	0	16	2	2	141	1	44	69	33	1	28	6	3	1	0	31	0	28	43	73	0	0	0	0	0	0	8	0
	1	0	11	2	0	3	0	2	88	0	11	44	31	1	9	12	4	3	1	19	0	14	13	40	0	0	0	0	0	0	3	0
	0	0	16	15	2	10	0	2		0	23	10	40	2	33	6	5	7	5	29	0	43	23	52	0	2	1	0	0	2		
	0	0	18	18	0	26	0	0	25	3		16	28	0	29	11	0	1	2	39	3	28	28	60		0	0	0	0	0		0
	0	0	17	0	0	11	0	1	76	1	18	24	35	0	15	3	0	3	1	12	1	11	18	44	1	2	0	0	0	0	7	0
	2	0	602	291	2	122	2	24	1,168	13	291	442	511	7	195	67	57	24	27	294	7	272	305	814	17	14	11			51	56	12
															< 70 >																	
	0	0	198	37	2	27		6	184	17	71	12	104	4	< 61 >		30	20	10	80		15	87	158	28	10	9	9	0	3	68	13
	0	0	52	53	1	40	1	0	100	6	60	8	38	1	42	5	0	28	6	75	0	28	60	70	13	15	1	1	0	0	33	19
	0	0	196	108	0	79	2	3	317	5	131	20	150	0	159	12	18	17	43	216	5	41	147	288	5	20	8	4	0	3	101	15
	0	0	148	40	6	119	3	3	256		246	14	30	0	98	47	8	15	27	178	8	76	250	276	7	11	11	5	0	3	157	24
	0	0			1			1	186	9	90	68	38	3	25	7	24	14	19	58	9	80	91	160	16	0	10	8	0	2	75	8
			594	238	10	265	6	10	1,044	37	598	122	360	8	324	71	80	94	105	607	22	240	635	952	63	56	39	27		11	434	79
															< 61 >																	
	0	0	240	16	18	22	0	2	81	3	70	3	136	10	75	51	2	0	10	135	1	112	89	208	2	1	7	2	0	1	50	0
	0	1	132	78	21	44	0	40	356	0	109	105	147	0	180	30	107	2	2	162	1	15	101	312	0	18	1	0	0	2	86	7
	2	0	90	18	0	25		6	213	3	48	40	112	3	89	2	5	4	18	89	1	18	51	1	3	0	0	0	0	0	30	0
	2	0	52	15	0	3	0	0	139	3	45	36	37[16]	2	11	26	3	3	0	37	3	14	75	110	0	1	0	0	0	0	8	0
	16	0	100	9	0	3	0	0	82	0	9	16	54	0	15	0	0	1	0	15	0	0	7	32	0	2	1	0	0	0	7	1
	1	0	46	11	0	7	6	5	116	0	15	4	97	0	45	3	5	2	1	36	0	10	16	104	0	9	0	0	0	0	14	3
	0	1	36	2	0	46		0	141	6	21	18	59	0	47	2	8	3	35	33	6	1	62	130	2	1	0	0	0	20	0	0
	0	0	148	11		8			223	0	50	6	152	2	147	2	28	14	2	162	0	3	50	201	1	9	0	0	0	1	19	1
	1	0	178	22	0	19		1	190	18	55	34	129	0	134	15	6	6	4	57	18	15	45	174	0	0	0	0	0	0	12	3
			65	40	0	4	1	6	462	1	12	74	325		< 99 >		48	< 38 >		88		73	52	440	2	13	0	0		2		
	2	0	12	12	0	8	1	0	27	0	14	49	13	0	2	0	5	0	6	5	0	4	14	< 46 >		0	0	0	0	46	5	0
			4	2	0	1	0	0	12	2	2	7	5	0			1	0	0	0		2	2	2	0	0	0	0	0	2	2	0
			18	14	0	3	2	2	26	6	21	18	19	0	< 18 >		1	0	1	3		8	21	57	0	1	1	1	0	2	22	1
143	0	62	9	0	4	2	0	83	0	28	21	30	0	22	17	19	1	0	16	0	3	17	83	0	0	0	0	0	0	6	8	1
38	2	1,183	259	39	190	19	62	2,151	39	499	431	1,315	8	167	148	215	36	79	838	30	278	602	1,854	10	55	10	3		82	273	17
															< 117 >			< 38 >					< 46 >								
0	0	19	4	0	8	1	0	16	0	16	17	11	0	4	7	0	1	1	13	0	16	16	21	0	0	0	0	0	0	11	2
0	0	3	3	0	8	0	0	0	0	11	28	9	0	1	5	0	0	0	5	0	8	4	20	0	0	0	0	0	0	0	0	0
125	12	23	11	0	3	9	2	28	0	22	23	6	2	7	0	3	2	0	11	0	8	18	29	0	0	0	0	0	26	6	3
6	0	10	8	2	2	2	0	26	0	12	11	3	0	0	6	0	0	2	3	0	5	18	18	0	1	0	0	0	4	6	1
2	1	65	44	0	79	1	1	129	1	74	7	27	5	11	45	1	4	6	54		115	87	95	3		4			58	56	1
1	0	38	23	0	32	2	0	113	0	53	31	20	0	20	23	5	2	3	46	0	62	62	73	3	0	0	0	0		23	0
		36	8	8	8	1	3	202	9	72	60	72		< 59 >		3	8	0	37		78	82	135	2	3	1	0		2	28	7
21	2	194	101	10	140	16	6	514	10	260	177	148	7	43	86	12	17	6	169		232	287	391	8	4	5			90	132	14
														< 59 >																	
62	66	2,933	1,092	81	841	50	127	5,665	129	2,041	1,346	2,791	40	1,615	436	525	219	240	2,179	89	1,894	2,226	4,320	315	168	129	52	11	243	1,157	142
														< 307 >			< 38 >						< 46 >								

[11] Includes unincorporated places.
[12] Includes sewers of industry, fed. and state govt.
[13] Includes cities with septic tanks.
[14] Magnetite filter.
[15] 1953 estimates.
[16] Plus 24 plain hopper-bottom settling tanks.
[17] Colorado now actually has 57 primary, 15 intermediate & 30 secondary treatment plants; plus 44 places with sewers but no plant.
[18] Includes 10 oxidation pond installations.
[19] A slow sand filter reported to work well.
[20] Communition & disinfection.
[21] Includes septic tanks.
[22] Oxidation ponds, not sewage lagoons.
[23] Approved only for limited use.

most 50%. Sewage lagooning is coming into its own. There are 42% more activated sludge plants.

• **No let-up seen**—Sewerage construction seems sure to keep booming.

Future sewerage projects by states (see table, right) are indicated by ENR backlog figures and by the work actually on the books as "needed" in the offices of responsible state officials. How fast these projects will go to contract and be built is indeterminable. Financing is, of course, the number one deterrent (although the survey indicates well over 800 communities have found the usefulness of revenue bonds backed by sewage service charges). Among the factors tending to shake this work out of its "proposed" and "needed" classifications are public education campaigns and the authority to order the work done, now vested in agencies of 24 states reporting.

The flow of new sewerage projects into the backlog was up 15% in the first nine months of this year above volume proposed in the same period in 1952. And while the unusual spurt of proposed projects that occurred in the final quarter of '52 is not apt to be repeated, it is likely that this year's total of proposed projects will wind up second highest on record.

Such a build-up of proposed work must make its weight felt in the investment market. Already this year state and municipal bond sales for sewerage work have rocketed to $362 million in the first 40 weeks. This is 109% more than the volume of new financing in the 1952 period. There is now no apparent shortage of investment funds, and with borrowing costs leveling off, it could be easier to finance sewerage next year.

Revenue bonds play an increasingly important role in sewerage financing. In the first 40 weeks of this year, revenue bonds brought in nearly $74 million in new funds, 57% more than in the '52 period. However, as a percentage of the total bond financing picture, revenues fell off from 27 to 20% of total bonds for sewerage—probably because of their higher yield.

• **Big business**—There were 670 contractors who signed up new sewerage business in 1952. They took on 991 projects with a total estimated cost of $258 million. That averages about $260,000 per contract. Meanwhile, 432 consulting engineers took on 1,161 sewerage projects—projects totaling $583 million and averaging $502,000. (Contractors and consultants included are only those who had $100,000 worth of new work of all types in '52, as reported by ENR and the CONSTRUCTION DAILY.)

FUTURE SEWERAGE PROJECTS

(Proposed and on the books as "needed")

	Proposed Sewerage Projects Recorded by ENR through Aug. 1953 Thous. $	Work on Record as "Needed" in the States					
		Sewers Only		Treatment Works Only		Both Sewers and Treatment	
		Places	Population Thous.	Places	Population Thous.	Places	Population Thous.
Maine	4,767	[4]	....	[4]	....	[4]	....
New Hampshire	4,952	....	....	7	75	5	50[1]
Vermont	2,030	[4]	....	[4]	....	[4]	....
Massachusetts	70,428	4	45	50	1,796	26	199
Rhode Island	40,366	2	6	0	0	6	51
Connecticut	25,222	....	....	24[2]	277	21	59
NEW ENGLAND	147,765	6	51	81	2,148	58	359
New York	371,475	....	....	80	437	222	[4]
New Jersey	72,197	....	....	11[3]	780	....	....
Pennsylvania	179,840	....	....	85[3]	....	....	....
Maryland	26,994	0	0	25	100	5[7]	20
District of Columbia	5,859	....	....	....	....	....	....
Delaware	9,762	....	....	12	[4]	10	[4]
MIDDLE ATLANTIC	666,127	0	0	213	1,317	237	20+[4]
Virginia	76,587	[4]	....	[4]	....	[4]	....
West Virginia	36,886	[4]	150[3]	[4]	600[3]	[4]	100[3]
North Carolina	27,734	[4]	....	[4]	....	[4]	....
South Carolina	17,134	12	75	8	200	12	50
Georgia	25,074	[4]	....	[4]	....	[4]	....
Florida	48,902	89	[4]	31	293	33	206
Alabama	30,045	8	50	26	340	16	25
Mississippi	10,378	39	61	25	225	64	286
Louisiana	23,239	[4]	....	[4]	....	[4]	....
Kentucky	23,750	....	....	37	531[9]	46	65
Tennessee	55,159	113	97	154	1,154	....	....
SOUTHERN	374,888	261	433	281	3,343	171	732
Ohio	247,153	[4]	....	[4]	....	[4]	....
Indiana	101,501	....	....	126[11]	856	....	....
Illinois	175,026	1[10]	9	41	240	5	11
Wisconsin	21,758	28	20	31	122	158	80
Michigan	168,900	[4]	....	....	....	[4]	....
MIDDLE WEST	714,338	29	29	198	1,218	163	91
Minnesota	35,272	0	0	135	326	180[12]	....
Iowa	15,978	89	48	74[13]	431	97	71
Missouri	77,251	[14]	600	75	750	200	200
Arkansas	26,326	9	132	8	51	49	147
North Dakota	3,287	8	9	23	56	....	....
South Dakota	2,031	15	10	27	43	12	8
Nebraska	33,145	....	....	85	421	92	40
Kansas	65,302	30	15	42[15]	333	....	....
Oklahoma	21,667	[4]	....	[4]	....	[4]	....
Texas	245,945	....	....	13[16]	270	....	....
Montana	4,997	8	18	45	204	21	12
Wyoming	2,879	5	....	23	70	35	53
Colorado	12,352	[4]	....	44	[4]	[4]	....
New Mexico	4,977	....	....	2	6	....	....
WEST OF THE MISSISSIPPI	551,409	204	832	596	2,961	686	531
Idaho	6,259	0	0	36	150	27	20
Utah	10,903	....	....	71	241	199	268
Arizona	4,137	0	0	1	10	38	66[8]
Nevada	2,334	....	20	....	10	....	30
Washington	26,022	....	....	60	660	....	....
Oregon	10,851	4	11	33	140	30	34
California	35 ,434	....	....	[4]	....	[4]	....
FAR WEST	419,940	4	31	201	1,211	294	418
UNITED STATES	2,874,467	504	1,376	1,570	12,198	1,609	2,151

[1] 43% of surface waters classified.
[2] Includes old plants needing improvement.
[3] Plus 10 sewer extensions and 36 improvements of entire systems.
[4] Total figure not available.
[5] Plus parts of 3 others; all 14 ordered started.
[6] All under order to start work.
[7] Only additions to present facilities.
[8] Estimated.
[9] Includes Louisville, pop. 369,129.
[10] Plus 3 places within Sanitary District of Chicago.
[11] Plus improvements on existing plants.
[12] Includes all communities with municipal water supply but no sewerage.
[13] Plus 157 improvements on existing plants.
[14] Trunk systems needed in St. Louis and Jackson counties.
[15] Plus 50 improvements on existing plants.
[16] Plus 183 improvements on existing plants.

Extensive sewerage works plan urged for Vancouver, B.C., area

A $65-million program of sewerage and drainage construction has been recommended by a board of consulting engineers for Vancouver, B. C., and surrounding area. The mid-September report represents a three-year study by engineers A M Rawn, Charles Gilman Hyde and John Oliver (the latter replaced the late Dr. E. A. Cleveland shortly after his death early in 1952). It suggests an early start on a $19-million sewerage program, additional sewerage work over a 25-year period amounting to $20 million.

To accomplish these works, the engineers recommended revision of the 1914 provincial law setting up the Vancouver and Districts Joint Sewerage and Drainage Board. The new law would enlarge the area originally included and raise the debt limit to $65 million.

• **The study encompassed** the entire greater Vancouver area of some 293 sq mi, which includes 14 political entities administered by city or provincial governments. This area, only a few miles north of the U. S. border, is bisected in an east-west direction by Burrard Inlet, a salt water arm separating Vancouver and North Van uver. Along the south edge of the area s the Fraser River delta that includes several populated islands. Both the inlet and the river empty into the Strait of Georgia, a northerly extension of Puget Sound.

These bodies of water receive sewage from the area, thus, an important phase of the study was an evaluation of these receiving waters and the degree of protection they require. An important element of this was extensive tide and current studies.

• **The suggested sewerage works** include several different systems. All but two discharge untreated sewage in waters where currents will prevent nuisance. The most extensive system collects sewage from the city of Vancouver and conveys it to a high-rate primary treatment plant at the mouth of an arm of the Fraser River (a high-rate plant is defined in the report as one that involves less than an hour of sedimentation and removes 50% of settleable solids). From the plant, the effluent is discharged to the Strait of Georgia through a 15,000-ft outfall.

A development on the north shore of Burrard Inlet will include a standard-rate primary plant.

Drainage works recommended will protect extensive areas from flooding and also will reclaim large marshy areas.

The recommended projects are expected to take care of the needs of the area through the year 2000. At that time population is predicted at 1,412,000 as compared with the present 520,000. Cost estimates for future work are based on recent prices adjusted to an Engineering News-Record construction index of 700 (for Sept. 1953, the index was 612).

Existing works of the Vancouver and Districts Joint Sewerage and Drainage Board are based on a 1913 report made by R. S. Lea of Montreal. It is considered significant that the Rawn-Hyde-Oliver study is only the second made on this area. If the earlier work establishes any precedent, the new recommendations will be closely followed.

Alternate-side-parking law aid to New York's clean-up

New York's alternate-side-of-the-street parking plan is in full swing, with 145 square blocks recently added to three large areas already under operation.

Started primarily as a street cleaning measure, the plan is certain to relieve some of the traffic congestion in the area.

Under the new regulations, parking will be prohibited for a three-hour period on the north side of crosstown streets and the west side of avenues on Mondays, Wednesdays and Fridays; and on the south side of crosstown streets and the east side of avenues on Tuesdays, Thursdays, and Saturdays.

This arrangement, which ultimately will affect an 800-block area, will permit cleaning equipment to work the car-free areas unhampered.

• **An ordinance with teeth**—As each area is placed under regulation motorists are given ample reminders of the restrictions. Forty men from the city relief rolls serve as traffic wardens, supplementing warning signs informing parkers of the new restrictions.

Motorists who disregard the warnings will be liable to a police depart-

McKIERNAN-TERRY
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ment fine of $15. The car will be towed away by the Department of Sanitation and impounded. A towing charge of $10.00 plus one dollar a day for storage will be levied.

In the areas already under operation excellent cooperation has been noted. Additional areas are added at the rate of one or two a week depending upon the size of the sections involved.

Little Rock officials hear highway construction plan

A $40-million "master plan" for traffic artery and highway development was presented recently by Highway Director Herbert Elridge to the municipal officials of Greater Little Rock, Ark.

Included in the plan are a bridge, extension of a high speed traffic route across the cities (Little Rock and North Little Rock) and relocation, renovation and-or reconstruction of U. S. Highways 167, 65, 70 and 67.

No objection to the general plan was raised, by the officials present, but the method of financing proved an obstacle. No decision has been rendered in that direction.

Virginia-Delaware cities join bid for clean rivers

Three Eastcoast rivers, receiving their share of attention in the nationwide movement for cleaner streams, figured in the news recently: The Potomac River and Delaware's Brandywine and Christina rivers. All have experienced a recent pollution reduction.

Arlington County, Va., dedicated a $3-million sewage treatment plant which was started early in 1952. The plant, located near U. S. Highway No. 1, will, it is claimed, materially reduce pollution in the Potomac.

Meanwhile, the master switch was thrown to start operation of a large pumping station in Wilmington, Del., which will service the region's new $11.5-million sewer interceptor system (ENR Mar. 13, 1952, p. 43).

The interceptor sewers, all gravity-flow with intermediate lift stations, vary in diameter from 36 to 78 in., and the only force-main section is an 84-in. line from the main pumping station to the treatment plant in the area's Cherry Island Marsh. After treatment, the effluent will be discharged through a long outfall into the Delaware River.

The station, equipped with five 30-in. pumps has a total capacity of 190 mgd. The present average dry weather flow is only about 35 mgd.

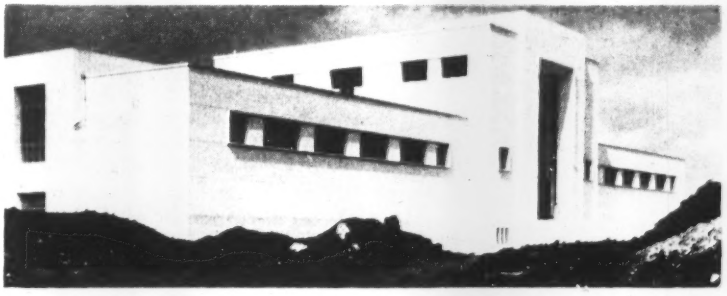
Burma plans huge development of its industry and resources

The Burmese government plans to launch soon a $1½-billion master program designed to develop natural resources. Construction of industrial plants is foremost on the schedule the present scope of which is only those works which could be implemented in the next five to seven years.

Confident that they can raise $1-billion for the project in their own country, Burmese officials are asking the World Bank and foreign investors for the other $500 million. Construction in the program will cost about $1-billion, and the importation of industrial machinery will account for remaining expenditures.

The top project in the plan is a pulp and paper mill that will use bamboo as its raw material. A jute mill for making burlap bags is the next most important item on the list. Since Burma's main income is derived from the export of its rice crop, burlap bags for rice are a very important commodity in the country. At present, burlap bags must be imported from India at an excessive expense.

The third major project is a steel rolling mill whose raw material will



WATER FOR EGYPT—The River Nile, heart's blood of Egypt, is also its major water supply source. However, the river has been a carrier of cholera and waterborne diseases, and the Egyptian government is taking steps to install modern water purification plants to stop epidemics. Samples are (above) the Sherbin Water Works, in North Egypt, that will supply drinking water to more than a million people in surrounding villages, and (below) where a community pump has been installed to supply fresh water to village women.

Eastern photos

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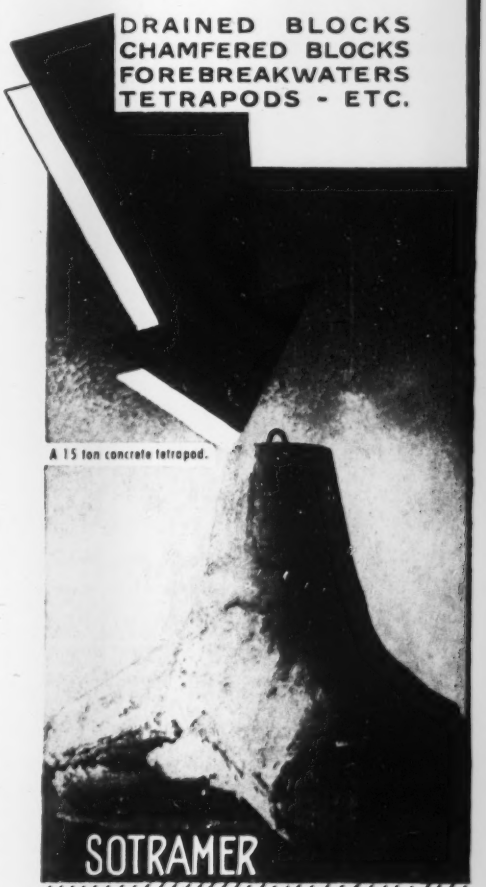

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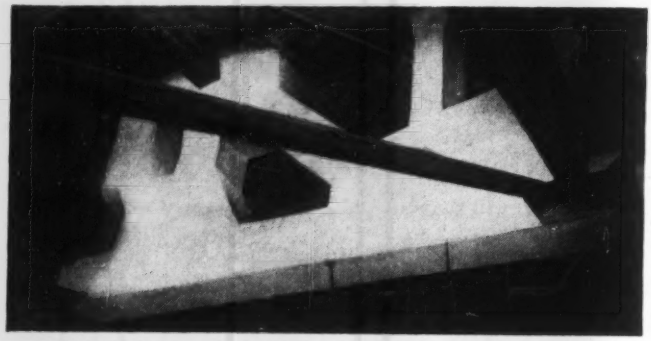

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be war scrap. Another important item for construction is a refining and extraction plant for producing edible oils from rice bran. (A by-product of milling rice, the bran is usually dumped as waste since the oil in it becomes rancid very quickly.)

A solar extraction plant for procuring salt from sea water will be built for supplying various chemical plants and producing table salt.

Lead and zinc ores are to be mined, and the program calls for construction of mining facilities, railways, warehouses and port facilities.

The whole scheme calls for a great deal of private investment in conjunction with government funds. The Burmese government is socialist and intends to maintain for the present about a third interest in all industries. In the future it plans to have a half interest in the country's industry.

Last June Burma concluded all U. S. aid programs and is now financing all its own development. The master plan for economic development is the work of the New York consulting firm of Knappen-Tippetts-Abbett-McCarthy who are at present working on the detailed program in Burma under contract to the Burmese government.

International briefs . . .

• **Flood warning system**—Great Britain has completed a flood warning system along its southeast coast to protect as much as possible against reoccurrence of catastrophes like those resulting from the flood of last February. Autumn's highest tides were in late September, but the danger season will last from then to the end of April. The system provides a constant liaison between harbormasters, weather men, hydrographers, police, and river boards.

• **Peruvian port**—Peru has authorized calling bids on $1.4-million worth of port works for Salaverry at the northern end of the Peruvian coast.

• **London airport expansion**—Plans for a $19-million modernization and expansion of existing facilities at the London Airport, England, have been announced. To be completed in 1956, the program includes three new buildings: a T-shaped control building with control tower and medical, administrative, and communication sections; a new passenger terminus; and an operations staff headquarters building. Engineers for the project are Sir William Halcrow and Partners, and the general contractor is the Taylor Woodrow Construction Co., Ltd., both of London.

OBITUARIES

John M. Gries, 76, public construction official at Washington between 1908 and the early 1930's died at Piqua, Ohio, Sept. 23. Under the administration of President Hoover he was chief of public construction and executive secretary of the President's conference on home building and home ownership. At one time he was chief of the building and housing division of the Bureau of Standards and became chief of public construction in 1929. He also represented the U.S. at several international housing conferences.

Philip Sachs, 73, a Cooper Union C. E. graduate, died in New York Oct 1. In 1923 when he was on the engineering staff of the N. Y. City Transit Commission, he submitted a detailed plan for improving the city's subway system.

William Earl Jones, 55, a civil engineer in Rochester, N. Y., for many years, died Sept. 16. He was graduated from Rensselaer Polytechnic Institute in 1925. He supervised the building of schools in the Rochester area as an engineer with the Board of Education. More recently he was employed by the state.

Richard M. Rumsey, 60, civil engineer and county highway superintendent for many years, died Sept. 18 in Niagara Falls, N. Y. He was named highway superintendent for Niagara County in 1926 and resigned recently. He formerly was an engineer with the New York State Department of Public Works in Buffalo.

Peter Manson, 89, president of the Manson Construction & Engineering Co. of Seattle, died there Sept. 25. Born in Sweden, he moved to the Pacific Northwest in 1887 and founded his own company more than 50 years ago. It has specialized in the construction of bridges and piers.

Ray A. Moncrieff, 67, vice-president of Chas. T. Main, Inc., Boston consulting engineers, died on Sept. 28 at Newton, Mass. He was widely known in the hydroelectric engineering field, and had also participated lately in the planning of the atomic energy development at Richland, Wash.

John B. Brandeberry, 56, dean of engineering of the University of Toledo, died Sept. 34. He joined the university in 1915, and became dean 10 years ago.

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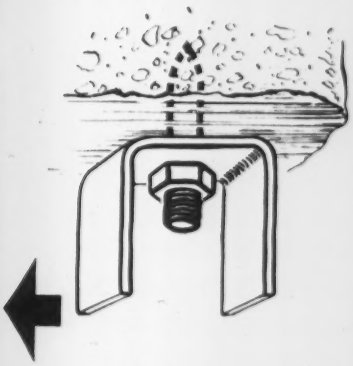

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J. A. MAHONEY, M. O. WETZEL, L. M. WINISKI, M E SCIORRA, F S. DEMBEK, Reports.
J. H. WEBBER, M R. ROESSLER, E R. HUBER, Statistics.

NEW ENGLAND

BIDS ASKED—BUILDINGS

▲ **Mass., Weymouth**—SCHOOL—B.A. 10/20—Town, 99 Middle St., Central Junior High School, off Broad St., East Weymouth, $2,000,000. Plans deposit $100. Kitham, Hopkins, Greeley & Brodie, 9 Arlington St., Boston; archts. CD 6/22.

Mass., Natick—SCHOOL—B.A. 10/22—Town, School Comm., Supt. of Schools, S. Main St., Bennett Hemenway School addn., East Evergreen Rd., $325,000. Plans deposit $30. Anderson, Nichols & Co., 150 Causeway St., Boston, archts. CD 5/20.

Mass., West Boyleston—SCHOOL—B.A. 10/29—Town, Supt. of Schools, Crescent St., Major Edwards High School addn. Plans deposit $50. S. W. Haynes & Assoc., 336 Main St., Fitchburg, archts. CD 9/5/51.

▲ **Conn., Newtown**—ADMISSIONS, etc.—B.A. 11/10—State, Ralph G. Macy, comr. P. Wks., State Office Bldg., Hartford, Proj. B/A-A-82, admissions and intensive treatment bldg., Fairfield Hospital, $5,000,000. Plans deposit $100. Westcott & Mapes, Inc., 109 Church St., New Haven, archt. CD 2/17.

HEAVY CONSTRUCTION

LOW BIDS AND CONTRACTS

MAINE—State Hy. Comn., State House, Augusta, Me.
Farrin Bros. & Smith, Brighton, Me., CA, $248,718 bit. grav. State Proj. 134, Fryeburg-Brownfield. Bids Sept. 30. CD 9/22.

Ralph Civitarese Co., 139 Providence St., Hyde Park, Mass., LB, $108,915, constr., install 16 in. trans mission mains, appurtenances, Walnut St. Pumping Station, LYNN, MASS. City Council, City Hall, Lynn, Mass. Bids Sept. 29. CD 9/15.

BUILDINGS

LOW BIDS AND CONTRACTS

▲ **George E. Emerson**, 34 Britton St., Pittsfield, Mass., LB $1,449,000. HOSPITAL, Hospital Ave., NORTH ADAMS, MASS.; North Adams Hospital, Inc., H. B. Clark, pres., Hospital Ave., North Adams, Mass. Bids Oct. 1. CD 9/1.

MIDDLE ATLANTIC

BIDS ASKED—BUILDINGS

▲ **D. C., Wash.**—BUILDING—B.A. 10/20—Canadian Government, Canadian Embassy, 1746 Massachusetts Ave. N.W., building for occupancy by the Canadian Joint Staff Mission at 2450 Massachusetts Ave. N.W. $1,000,000. Plans deposit $50. Marani & Morris, 1250 Bay St., Toronto, Ont.; archts. Faulkner, Kingsbury & Stenhouse, Ring Bldg., assoc. archts. CD 1/12.

N. Y., Brooklyn—HOUSING—B.A. 10/20—New York City Housing Auth., 64 Park Row, New York, Zone 38, foundations for Bay View Houses, Proj. No. NYC 24 in area bounded generally by Seaview Ave., E. 102 St., Shore and Rockaway Parkways, excluding the northerly portion of area generally bounded by Seaview Ave. in E. 102 St., Skidmore Ave. and E. 100 St., Brooklyn Boro. Plans deposit $75. Extended date. C 9/17.

Pa., Mt. Lebanon—BANK and OFFICE—B.A. 10/20—Mt. Lebanon Federal Savings & Loan Assoc., 656 Washington Rd., substructure and shell for 3 story bsmnt., 80x120 ft., brick, steel, steel bank and office. $700,000. Bank Building & Equip. Corp. of America, 906 Sidney St., St. Louis, Mo., archt. CD 8/24/50, under LB.

▲ **N. Y., New York**—SCHOOL—B.A. 11/6—Bd. Educ., 49 Flatbush Ave. exten., Brooklyn, Zone 1, general constr. new P. S. 191, E-148, Amsterdam Ave., 60 and 61 Sts., Manhattan Boro, $1,515,000. Plans deposit $26. CD 9/8/48.

SOON LETS CONTRACT—BUILDINGS

▲ **Pa., Puttsburgh**—ENGINEERING and MINES—University of Pittsburgh, Forbes St., soon lets contract, 6 story, 80x150 ft., brick, block, steel School of Engineering & Mines, O'Hara St. $1,000,000. Hoffman & Crumpton, 700 Century Bldg., archts. CD 7/14.

HEAVY CONSTRUCTION

LOW BIDS AND CONTRACTS

▲ **NEW YORK**—Bureau Contracts & Accounts, The Governor Alfred E. Smith State Office Bldg., Albany.
Slattery Rock Corp., 46-30 54 Rd., Maspeth, N. Y., LB $6,777,652, est. $6,903,000, 1.29 mi. Cross Bronx Expressway, Contr. 9K, White Plains Rd., Zerega Ave. FA.CBE 53-2, Bronx Co. Bids Oct. 1. CD 9/9.

▲ **NEW YORK**—Bureau Contracts & Accounts, The Governor Alfred E. Smith State Office Bldg., Albany.
Madison County Constr. Co., Inc., Madison, N. Y., LB $317,738, est. $333,000, Upper Jay Keene, SH. 5236, Jay-Upper Jay, SH. 5235, 0.75 mi. FARC. 53-120, Essex Co.;
DeLillo Constr. Co., Inc., 71-15 51 Ave., Woodside, N. Y., LB $787,263, est. $796,000, 1.49 mi. Corning City; West City Line-Chestnut St., Erie Ave.-Denison Parkway, Corning City; Denison Parkway Extens., FAC. 49-4, FAC. 53-19, FARC 53-123, Steuben Co.; cancelled bids to have been opened Oct. 1, New York State Thruway-Hudson Sect. Subd. 10 (Tuckahoe Rd.-Tarrytown); New England Interch.; Ramps P, Q, J and K; eight misc. secondary roads, Ardsley Village, S. H. 1053 and Ardsley-Elmsford, Pt. 1, S.H. 18, Acc. 6.53 and Thy. 7.61 mi. H. T. 53-11, S. T. 53-34, R. C. 53-122, Westchester Co. $12,394,000. CD 9/9.
Terry Contg. Co., 103 Park Ave., New York, N. Y., LB $149,890, extending Upper Lock Gates, removing old and replacing new Lower Lock Gates, lowering Sills, lining valve and culvert walls, performing other misc. work at Barge Canal, Lock 7, near Niskayuna, U.S. 88, Schenectady Co., NEW YORK. Bureau Contracts & Accounts, The Governor Alfred E. Smith State Office Bldg., Albany, N. Y. Bids Oct. 1. CD 9/16.
▲ **Merritt-Chapman & Scott Corp.**, 260 Madison Ave., New York 6, N. Y. LB $5,296,555, Contr. Rte. 119G (Rockaway Route), Jamaica Bay Crossing, substructure and low trestle deck from North Channel to Beach Channel, Queens Co., JAMAICA, N. Y. New York City Transit Auth., 370 Jay St., Brooklyn 1, N. Y. Bids Oct 2. CD 9/9.

Boro, Boro Hall, Lakehurst, N. J., rejected bids Sept. 17, sewerage treatment plant and seawerage sys., LAKEHURST, N. J. LB, $143,824. New bids about Nov. 1. C 9/28, under LB.

▲ **PENNSYLVANIA**—State Hy. Dpt., 506 N. Office Bldg., Harrisburg.
Hempt Bros., R. D. 1, Camp Hill, Pa., CA $1,029,233, 28,885 ft. crushed aggregate base hy. with bit. surf. variable in width, one I-beam bridge, T.R. 74, York Co.;
Vern Sherwin, P. O. Box 615, Somerset, Pa., CA $624,746, 20,638 ft. crushed aggregate base hy. with bit. surf. 22 ft. wide, L.R. 32035, 32036, Indiana Co.;
Central Pa. Quarry, Stripping & Constr. Co., 270 S. Pine St., Hazleton, Pa., CA $1,176,442, 12,965 ft. rein.-con. road variable in width, two I-beam and one rein.-con. bridges, T.R. 14 and 15, Lycoming Co. Grand total $2,830,421. Bids Sept. 18, awarded Sept. 30. CD 9/23 under LB.
Electrical Contractors Associates, Inc., 1801 Logan Ave., Altoona, Pa., LB $179,400, est. $180,000, electrical imprvs.;
Kneppers Plumbing & Heating, Greensburg, Pa., LB $154,540, est. $140,000 steam distr. sys. imprvs. at Torrance State Hospital, TORRANCE, PA. General State Auth., 18 and Herr Sts., Harrisburg, Pa. Bids Sept. 30. CD 9/22.

BUILDINGS

LOW BIDS AND CONTRACTS

▲ **Joseph P. Blitz, Inc.**, 150 E. 39 St., New York, N. Y., LB $3,173,800, general constr.;
J. L. Murphy, Inc., 340 E. 44 St., New York 17, N. Y., LB $394,210, plumbing for Brevoort HOUSES, Proj. No. NY 5-17, Sect. II, incl. Bldgs. 7 to 13 (inclusive) in area bounded generally by Bainbridge St., Ralph Ave., Marion St. and Patchen Ave., BROOKLYN, N. Y. New York City Housing Auth., 63 Park Row, New York 38, N. Y. Bids Sept. 15. (Correction—low bidder). CD 9/15, under LB.
A. Roberts, c/o Julius Fishkind, archt., 161-19 Jamaica Ave., Jamaica, N. Y. Separate Contracts $840,000. 6 story APARTMENT, 149 St. and Roosevelt Ave., FLUSHING, N. Y. CD 1/21.
▲ **Rolling Hills Homes**, c/o William G. Chirgotis, archt., 968 Stuyvesant Ave., Union, N. J. Owner Builds. $1,750,000 80 HOUSES on tract on Southern Blvd. and Noe Ave. CHATHAM, N. J.
Isaac Degenaars Co., Wycoff, N. J., LB, $377,558 elementary SCHOOL, GLEN ROCK, N. J. Bd. Educ., Boro of Glen Rock, N. J. Bids Sept. 22. CD 9/17.
▲ **Parsippany Estate Homes**, c/o Roche & Roche, archts., 234 W. 44 St., New York 36, N. Y. Owner Builds, $1,000,000. 80 HOUSES on 50-acre tract off South Beverwyck Ave., PARSIPPANY, N. J.
Becker Constr. Co., 361 Grove St., Newark, N. J., LB, $959,169, Junior High SCHOOL, RIDGEWOOD, N. J. Bd. Educ., Administration Bldg., Ridgewood, N. J. Bids Sept. 23. CD 8/12.
Beyer Constr. Co., 26 Mohawk Ave., Warren, Pa., LB $323,889, general constr.;
E. A. Campagna, 818 W. Lackawanna Ave., Scranton, Pa., LB $440,380, mech. constr. BOILER PLANT addn., Warren State Hospital, WARREN, PA. General State Auth., 18 and Herr Sts., Harrisburg, Pa. Bids Sept. 30. CD 9/10.

SOUTH

BIDS ASKED—HEAVY CONSTRUCTION

WEST VIRGINIA—B.A. 10/27—West Virginia Turnpike Comm., D. H. Morton, chn., 1340 Wilson St., Charleston, Zone 5.
Mercer, Raleigh, Fayette and Kanawha Counties—Contract Nos. 39, 39A, 39B, 39C and 39D furnishing, erection and painting corrugated steel guard rail, either or both steel and wood posts; timber shoulder curbs and other incidental work between Princeton Mile 0 and Charleston Mile 88. Howard, Needles, Tammen & Bergendoff, P. O. Box 5266, Capitol Station, Charleston, consult. engrs.; adv. ENR 10/15. CD 4/30/52.

BIDS ASKED—BUILDINGS

La., New Orleans—NURSES HOME—B.A. 10/20—Touro Infirmary, 3516 Prytania St., 8 story nurses' home, $750,000. Goldstein, Parham & Labouisse, American Bank Bldg., archts. CD 6/28/49.
Fla., Pensacola—AUDITORIUM—B.A. 10/21—City, City Hall, municipal auditorium $750,000. Extended date. Young & Hart, Blount Bldg., archts. CD 8/27.
S. C., Camden—HIGH SCHOOL—B.A. 10/23—Kershaw Co. Bd. Educ., Camden, Jackson High School. $550,000. Plans deposit $100. Richard & Yates, Camden, archts. CD 9/30.
Ga., Milledgeville—PHSYCHIATRIC—B.A. 10/27—Georgia State Dpt. P. Welfare, State Office Bldg., Atlanta, 1000-bed psychiatric bldg. at State Hospital. Over $500,000. Plans deposit $50. Gregson & Ellis, Mortgage Guarantee Bldg., Atlanta, archts.
Ala., Columbiana—OFFICE—JAIL—B.A. 10/29—Shelby Co., county office-jail bldg. $300,000. Martin J. Lide, Brown-Marx Bldg., Birmingham, archt.
La., Ville Platte—HIGH SCHOOL—B.A. 10/30—Evangeline Parish School Bd., Ville Platte, James Stephens Negro Elementary-High School. Extended date. CD 9/30.
Ga., Swainsboro—SCHOOLS—B.A. 11/4—Emanuel Co. Bd. Educ., Swainsboro (1) White Elementary-High School, $400,000 (2) Negro Elementary High School, $400,000. Plans deposit $50 each. Logan & Williams, Palmer Bldg., Atlanta, archts. CD 8/27/52.
▲ **Va., Charlottesville**—SCHOOLS—B.A. 11/4—Charlottesville School Bd., Charlottesville, Cherry Ave. School; Long Street School. $1,260,000. CD 8/25.

HEAVY CONSTRUCTION

LOW BIDS AND CONTRACTS

▲ **GEORGIA**—State Hy. Dpt., Atlanta.
Suber & Co., Whitmire, S. C., CA, $304,183, 10.965 mi. State Rt. 166, S 1040 (1) and S 0841 (1)

PROJECTS COVERED

Projects—By Size

Construction projects here reported cover the United States and Canada, are of these minimum sizes or larger: water supply, earthwork, waterways $34,000; other public works $60,000; industrial buildings $82,000; other buildings $300,000.

Classes of Construction

(Name in order of Listing)

Water Supply
Sewers, Waste Disposal
Bridges
Streets & Roads
Earthwork, Waterways
Latin America
Public Buildings
Commercial Buildings
Industrial Buildings
Unclassified

Stages Reported

PROPOSED WORK: Including appointment of engineers or architects.
BIDS ASKED (new announcements only). For full calendar, see also preceding issues of ENR.
LOW BIDDERS: On jobs below $500,000 value all low bidder news will be the final reports published on the projects invloved except where award is not made to the low bidder. In this case, a supplementary contract award report will be published.
CONTRACTS AWARDED: Except awards to low bidders previously reported in low bidder stage.
Dates shown are of issue in which last previous report was published.

Symbols and Abbreviations Include:

† Federal Government
▲ Project of $1,000,000 or over.
B.A. Bids Asked
ENR Engineering News-Record
CD Engineering News-Record Construction Daily

Carroll and Douglas Counties; CA $319,610, 8.07 mi. State Rt. 155, S 0866 (3), DeKalb and Henry Counties;

Henson & White Constr. Co., Alamo, Ga., CA, $83,130, 5.655 mi. State Rt. 90, S 0535 (1), Ben Hill Co.;

W. L. Cobb Constr. Co., Decatur, Ga., CA, $343,328, 1.81 mi. State Rte. 25, FI 009-1 (3), Camden Co.;

Wright Contg. Co., 504 25 Ave., Columbus, Ga., CA, $73,767 7.257 mi. State Rt. 30, S 0956 (1) Effingham Co.;

M. R. Woodall Co., 1540 Lakeside Dr., Atlanta, Ga., $91,019 6.124 mi. Rt. 1339, S01339 (1), Franklin Co.;

E. F. Groover, Moultrie, Ga., CA, $77,530, 6.974 mi. State Rt. 179, SAP 1864-A (16), Grady Co.;

Lothridge Bros., Gainesville, Ga., CA, $139,453, 5.818 mi. FAS Rt 909, S 0909 (2) Hall and Jackson Counties; CA, $80,207, 5.702 mi. State Rt. 162, S 1241 (2), Newton Co.;

J. B. Gibson Constr. Co., Donaldsonville, Ga., CA $123,110, 7.479 mi. State Rt. 45, S 0504 (2), Miller Co. Bids Sept. 25, awarded Sept. 29. Grand total $1,635,237. CD 9/18.

Public Service Telephone Co., Reynolds, Ga. Owner Builds, $350,000, telephone lines in Crawford, Talbot, Bibb, Upson, Macon and Monroe Counties, GEORGIA.

Union Point Telephone Co., Union Point, Ga., Owner Builds, $150,000, telephone lines in Greene, Hancock, Oglethorpe and Taliaferro Counties, GEORGIA.

† **Ivy H. Smith Co.,** 1525 San Marco Blvd., Jacksonville, 7, Fla., CA, $839,124, Pumping Station S-9, Central Southern Flood Control Proj., CIVENG-08-123-54-6, FLORIDA. U. S. Eng., P.O. Box 4970, Jacksonville, Fla. Bids Sept. 29. CD 8/24.

Sullivan, Long & Hagerty, 2026 2 Ave., Bessemer Ala., CA, $647,000, water filtration plant addn., TAMPA, FLA. City, City Hall, Tampa, Fla. Bids Sept. 22. CD 9/30, under LB.

▲ **Sullivan, Long & Hagerty,** 2026 2 Ave., Bessemer, Ala., CA, $2,069,731, sewer treatment plant, Ensley, BIRMINGHAM, ALA. Jefferson Co., Court House, Birmingham Ala. Bids Sept. 22. CD 9/30, under LB.

† **Blount Bros. Constr. Co.,** P.O. Box 1144, Montgomery, Ala., LB, $397,222, airmen's dormitories, Gunter Air Force Base, MONTGOMERY, ALA. U. S. Eng., P.O. Box 1179, Mobile 7, Ala. CD 2/18.

M. & W. Constr. Co., P.O. Box 116, Tupelo, Miss., CA $111,543, sanitary sewer imprvs., BOONEVILLE, MISS. City, Booneville, Miss. Bids Sept. 25. CD 9/14.

BUILDINGS

LOW BIDS AND CONTRACTS

▲ **Skinner & Garrett,** Contractors, 1719 I St. N.W., Wash., D. C., LB $2,052,600, Williamsburg Junior HIGH SCHOOL, ARLINGTON, VA. Bd. Educ., 1426 N. Quincy St., Arlington, Va. Rhees Burket, 1223 Connecticut Ave. N.W., Wash., D. C., archt. Bids Oct. 1.

▲ **Daniel Constr. Co.,** P.O. Box 2286, Greenville, S. C. LB $4,600,000. DORMITORY QUADRANGLE, CLEMSON, S. C. Clemson College, Clemson, S. C. Bids Sept. 25. CD 9/14.

East Atlanta Realty Co., 498 Flat Shoals Ave. S.E., Atlanta, Ga., Owner Builds. $750,000, 116 RESIDENCES, ATLANTA, GA.

E. Cunningham, c/o Knox & Beacham, archt., 1197 N.E. Cleveland St., Clearwater, Fla. Owner Builds. $300,000. MOTOR COURT, CLEARWATER, FLA.

Parker Brown Constr. Co., Dothan, Ala., LB, $369,171 DORMITORY at Industrial School for Boys, MARIANNA, FLA. Florida State Imprvt. Comn., Caldwell Bldg., Tallahassee, Fla. Bids Sept. 28. CD 9/4.

W. C. Von Arx, North Redington Beach, Fla., CA, $450,000 APARTMENT, NORTH REDINGTON BEACH, FLA. Old Colony Development Co., 170 Ave. and 1 St., North Redington Beach, Fla.

Florida Builders, Inc., 5200 Central Ave., St. Petersburg, Fla. Owner Builds. $350,000. 50 RESIDENCES, ST. PETERSBURG, FLA.

Edward Scott, 1224 Madison St., Tampa, Fla., CA, $375,000, HOSPITAL addn., TAMPA, FLA. St. Joseph's Hospital, 7 Ave. and Morgan St., Tampa, Fla.

Southeastern Constr. Co., 690 Kennesaw Ave. N.E., Atlanta, Ga., CA, $963,651, TB HOSPITAL, GADSDEN, ALA. District 4, State TB Bd., Gadsden, Ala. Bids Sept. 22. CD 9/30, under LB.

Erhart-Knopf Constr. Co., Inc., 1112 E. Broadway, Louisville 4, Ky. CA $793,845. Riedland SCHOOL, PADUCAH, KY. McCracken Co. Bd. Educ., Paducah, Ky. Bids Sept. 10, awarded Sept. 25. CD 9/16, under LB.

MIDDLE WEST

BIDS ASKED—HEAVY CONSTRUCTION

▲ **Ill., East St. Louis**—B.A. 10/21—City, Alvin G. Field, mayor, City Hall, Section 1A of main trunk sewers in Ohio Ave., 24 to 34 Sts., and Section 3 of sanitary lateral sewers, $1,000,000. Horner & Shifrin, Shell Bldg., 1221 Locust St., St. Louis, 3, Mo., engrs. Bids 8/5 rejected Sect. 1, LB, $1,229,152; Sect. 3, LB $520,132. CD 8/17, under LB.

† **O., Dayton**—RESEARCH BLDG.—B.A. 10/29—U. S. Eng., 830 W. Broadway, Louisville 3, Ky., propeller control and research bldg., Wright Patterson Air Force Base, Serial No. ENG-15-029-54-11. Plans deposit $15. Extended date. CD 9/17.

BIDS ASKED—BUILDINGS

† **O., Lima** — WAREHOUSE, etc. — B.A. 10/28—U. S. Eng., 237 Fourth Ave., Huntington 18, W. Va., ware-

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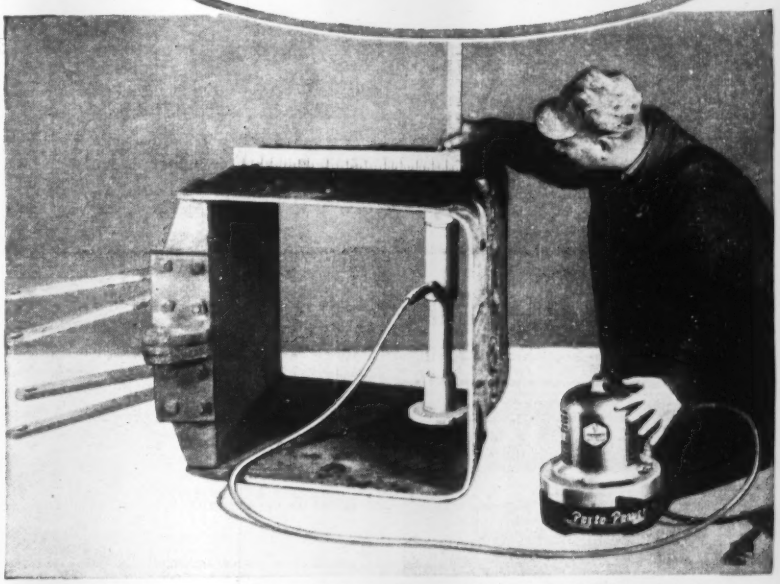

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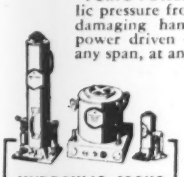
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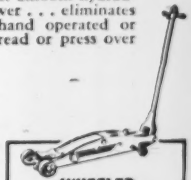
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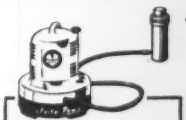
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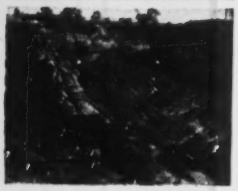

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O., Whitehall (Br. Columbus) — HIGH SCHOOL — B.A. 10/28—Bd. Educ., Truro Local School Dist., 550 Yearling Rd., Columbus, Zone 13, high school, 675 Yearling Rd. Plans deposit $15. John Quincy Adams, 33-35 S. Champion St., Columbus, Zone 5, archt. CD 5/12.

HEAVY CONSTRUCTION

LOW BIDS AND CONTRACTS

R. G. Mattern, 2310 N. Western Ave., Dayton, O., LB $111,884, est. $117,434, imprv. Philadelphia Dr. from Haverhill Dr. to Riverview Ave., DAYTON, O. City, Municipal Bldg., Dayton, O. Bids Sept. 25.

ILLINOIS—State Div. Hys., Springfield,

Thomas McQueen Co., 1313 S. Circle Ave., Forest Park, Ill., CA, $607,414, substructure and erecting structural steel for grade separation structure on Western Ave. in Chicago, over Congress Street Expressway, Cook Co. Bids Sept. 11. CD 9/24, under LB.

Barton-Malow Co., 2631 Woodward Ave., Detroit, Mich. CA $112,700. Contr. PL-11A, 23x87 ft., T-shaped Canfield Power Sub-station, Canfield St. East, DETROIT, MICH. City, P. Lighting Dpt., 1367 Maple St., Detroit, Mich. Bids Sept. 15. CD 8/27.

BUILDINGS

LOW BIDS AND CONTRACTS

▲ † **Thompson Products, Inc.,** 23555 Euclid Ave., Cleveland, O., CA est. $1,166,000, construct and operate PLANT and utilities in Perry Twp. for jet engine testing laboratory, PAINESVILLE, O. Bureau Aeronautics, Dpt. Navy, 18 St. and Constitution Ave. N. W., Wash. 25, D. C. CD 8/24/52.

Industrial Operations, Inc., 966 N. Meridian St., Indianapolis, Ind., CA, $500,000. design and construct, 1 story, 75,000 sq. ft. OFFICE and WAREHOUSE, Ko-We-Ba Lane, INDIANAPOLIS, IND. Geo. Hitz & Co., 120 S. Alabama St., Indianapolis, Ind.

Huber, Hunt & Nichols, Speedway, Indianapolis, Ind., CA, $450,000, SALES and SERVICE BLDG., 2333 N. Illinois St., INDIANAPOLIS, IND. Hoosier Cadillac Co., 2330 N. Meridian St., Indianapolis, Ind. Allen & Kelley, Architects & Builders Bldg., Indianapolis, archts.

Surber Realty Co., 813 S. A St., Richmond, Ind. Owner Builds, $300,000, HOMES, RICHMOND, IND.

Leo M. Riley, Inc., 18200 Plymouth St., Detroit, Mich. Owner Builds. $300,000. brick ranch HOUSES, Dorchester Hills, BLOOMFIELD, MICH.

Gringle Realty, 17522 McNichols Rd., Detroit, Mich. Owner Builds. $450,000. Heather Hill Estates, 15 HOMES, FARMINGTON, MICH.

Ward M. Ross, Inc., 1941 S. Telegraph St., Pontiac, Mich. CA $619,360. general contract 2 story, brick, steel Northwest SCHOOL, North Rose St., MOUNT CLEMENS, MICH. Bd. Educ., Mount Clemens, Mich. CD 10/1, under LB.

Fullerton Home Builders, 19156 Filer St., Detroit, Mich. Owner Builds. $330,000. thirty 1 story, brick veneer HOUSES, Ithaca St., OAK PARK, MICH.

WEST OF MISSISSIPPI

BIDS ASKED—BUILDINGS

Tex., Dallas—MEDICAL—Bids Asked—Angus C. Wynne, Jr., c/o American Home Realty Co. and Wynnewood Village, Inc., 2311 Salerno St., medical bldg. $500,000. De Witt & Swank, 2925 Cedar Springs St., archts. CD 9/23.

SOON LETS CONTRACT—BUILDINGS

▲ **Mo., Springfield**—DEPARTMENT STORE—Sears Roebuck & Co., 925 S. Homan St., Chicago, Ill., soon lets contract branch department store. $1,250,000. Richard Stahl, 530 S. National St., archt.

HEAVY CONSTRUCTION

BIDS ASKED—BUILDINGS

Wm. Myers Co., 206 W. 39 St., Kansas City, Mo. LB $118,768, est. $121,692. A.F. R.T.P. Warehouse, 86x200 ft., utilities, roads, etc., Grandview Air Force Base, ENG-23-028-54-16, GRANDVIEW, MO. U. S. Eng., 601 Davidson Bldg., Kansas City 8, Mo. Bids Sept. 23. CD 8/27.

L. G. Barcus & Son, 1430 State Ave., Kansas City, Kan. CA $653,946. rebuilding East Kansas Ave. bridge (23 St. viaduct) two 20 ft. roadways, two medial strips, 4 ft. sidewalks, KANSAS CITY, KAN. Comrs. Wyandotte Co., c/o R. W. Jensen, clk., Court House, Kansas City, Mo. Sverdrup & Parcel, Inc., 11118 Syndicate Trust Bldg., St. Louis, Mo., engr. Paul H. Hemebaugh, c/o owner, engr. on site, Bruce M. Browne, co. engr. CD 8/12, under LB.

† **Leslie Miller, Inc.,** 2914 E. Rosedale St., Fort Worth, Tex. LB $342,973, est. $374,134. hydrant refueling facility, Pump House C, Forbes Air Force Base, ENG-23-028-53-119, near TOPEKA, KAN. U. S. Eng., 601 Davidson Bldg., Kansas City, Mo. Bids Sept. 18. CD 6/30.

▲ **Ford, Bacon & Davis, Inc.,** 39 Broadway, New York, N. Y. CA Approx. $8,875,000, est. $12,000,000. pipe line, Duncan, Okla., to Mississippi River in vicinity of Memphis, Tenn., OKLAHOMA, ARKANSAS, LOUISIANA, TENNESSEE. Sunray Oil Corp., 1st Natl. Bldg., Tulsa, Okla. (Oklahoma-Mississippi River Products Pipe Line, Inc. being organized to build and operate the project). CD 9/28.

▲ **TEXAS**—State Hy. Comn., Austin,

Austin Road Co., P.O. Box 1590, Dallas, Tex., CA $1,230,305. grading, sec. strs., roadbed tr., c. conc. paving and flexible base shoulders 7.115 mi. Hy. U. S. 75, Proj. I 832 (14), Dallas Co.;

H. B. Zachary Co., P.O. Box 2570, San Antonio, Tex., CA $840,848. grading, drainage, structures, paving 4.4 mi. Hy. Access Rd., Proj. AD-3, Bexar Co. Bids Sept. 22, awarded Sept. 25. CD 9/29, under LB.

▲ **TEXAS**—State Hy. Comn., Austin,

Harry Campbell & Harry Newton, Inc., Rt. 5, Box 68-A, Abilene, Tex., CA $1,008,676, roadbed tr., flexible base and c. conc. 5.505 mi. Hy. Loop 12, Dallas Co. Bids Sept. 23, awarded Sept. 25. CD 9/28, under LB.

Texas Gulf Sulphur Co., c/o Spindle Top Dome, Beaumont, Tex. Purchase and Hire. $100,000. water purification plant enlargement, BEAUMONT, TEX. CD 9/29.

▲† **Farnsworth & Chambers Co., Inc.,** Box 74, Houston 1, Tex., CA $12,686,995. base maintenance shops, air plane hangar, concrete aprons, utilities. Serial No. (IFB)-41-608-54-5B, KELLY AIR FORCE BASE, TEX. U. S. Govt., Dir. of Procurement, Bldg. 43, Kelly Air Force Base, SAAMA, San Antonio, Tex. Bids Sept. 14. CD 9/16, under LB.

Orange County Water Control & Improvt. Dist. 1, Orange, Tex., rejected bids Sept. 22, sanitary sewer distr. lines, LB $131,064; 2 lift stations, LB $62,215, sanitary sewer treatment plant, LB $68,952, VIDOR, TEX. Will re-advertise. CD 9/30, under LB.

▲ **Ross & Powers Constr. Co.,** Billings, Mont.; Associated Pipe Line Contractors, 3272 Westheimer St., Houston, Tex.; **Eastern Pipeline Contractors,** Mercantile National Bank Bldg., Dallas, Tex. and **Engineers Ltd. Pipeline Co.,** 2040 S. Navajo St., Denver, Colo. CA $20,500,000. 537 mi. 10 in. oil line from Billings, Mont. to Spokane, Wash., MONTANA, IDAHO AND WASHINGTON. Continental Pipe Line Co. & Associated Companies, Billings, Mont.

Lichty Constr. Co., Riverton, Wyo., LB, $146,549, Schedule 1;

Harry F. Berggren & Sons, Inc., Scottsbluff, Neb., LB, $106,318, Schedule 2, earthwork, asphaltic membrane lining and structures for Fort Laramie Canal, North Platte Proj., Spec. DC 4017, WYOMING and NEBRASKA. Bureau Reclamation, Dpt. Interior, Casper, Wyo. CD 8/18.

BUILDINGS

LOW BIDS AND CONTRACTS

McNeary Building Co., 8421 Gravois Ave., Affton 23, Mo. Own Forces. $300,000 thirty 1 story 24x32 or 24x40 ft. frame RESIDENCES, Marley, Behr and Hacker Sts., AFFTON (St. Louis 23, P.O.) MO.

Schneiderhahn Constr. Co., 450 S. Brentwood Blvd., Clayton 5, Mo. CA $300,000. 2 story, bsmt., 114x122 ft. Bedford Ashlar stone, steel, concrete, masonry CHURCH, Kirkwood Rd. and Woodbine Ave., KIRKWOOD (St. Louis 22, P.O.) MO. Concordia Lutheran Church of Kirkwood, Rev. Walter F. Fisher, pastor. 110 Woodbine Ave., Kirkwood 22, Mo. CD 10/8/52.

▲† **Fruin-Colnon Contg. Co.,** 1706 Olive St., St. Louis 3, Mo. and **Peter Kiewit Sons Co.,** 1024 Omaha National Bank Bldg., Omaha, Neb. joint bids LB $12,574,850. RECORDS CENTER, incl. 6 story, 282x728 ft. main bldg., 1 story, 103x236 ft. cafeteria, assembly hall adjacent bldg. other auxiliary bldgs., facilities, ENG-23-028-54-12B, OVERLAND (ST. LOUIS 14 P.O.), MO. U. S. Eng., 601 Davidson Bldg., Kansas City 8, Mo. Bids Sept. 30. CD 9/10.

Fisher & Frichtel, Inc., 8904 Lackland Rd., Overland 14, Mo., CA $300,000. 1 story, 21,000 sq. ft., SUPER MARKET, 6,000 sq. ft. drug store, 9,500 sq. ft. medical clinic, several other shops and office bldg., parking facilities for 400 cars, etc., ST. JOHN'S (St. Louis 14 P.O.) MO. McKibbon Investment Co., 8904 Lackland Rd., Overland 14, Mo.

▲ **Millstone Constr. Co.,** 4343 Clayton Ave., St. Louis 10, Mo. CA $3,873,000, general contract;

E. F. Fischer Co., 4134 Westminster Pl., St. Louis 8, Mo. CA $569,198, plumbing;

Sodeman Heat & Power Co., 2306 Delmar Blvd., St. Louis 3, Mo. CA $593,333. heating for 530 DWELLING units, other incidental work for completion of Phase 2 of Proj. Mo. 1-5, ST. LOUIS, MO. St. Louis Housing Auth., John J. O'Toole, exec. dir., 901 Washington Ave., St. Louis 1, Mo. CD 10/1, under LB.

George L. Cousins Contg. Co., 875 E. Skinker Blvd., St. Louis 5, Mo. CA $500,000. 1 story, balcony, bsmt., 98x97 ft. and 58x50 ft. granite, brick, cut stone, rein.-con. BANK, parking deck on roof, 6313 Easton Ave., WELLSTON (St. Louis 14, P.O.) MO. State Bank & Trust Co. of Wellston, Philip C. Kopitsky, chn. Bd., 6209 Easton Ave., Wellston 14, Mo. Bids Sept. 18. CD 1/22.

Parsons Constr. Co., Grain Exchange, Omaha, Neb. CA general constr.;

J. J. Hanighen Co., 915 N. 20 St., Omaha, Neb. CA plumbing and heating;

Commonwealth Electric Co., 3rd and Pierce Sts., Lincoln, Neb., electrical work, CA truck-trailer SERVICE SALES branch bldg., OMAHA, NEB. Trailmobile, Inc., 31 and Robertson Sts., Cincinnati, O. Est. $350,000. Schatz & Elliston, 18 E. 4 St., Cincinnati, O., and L. A. Dworak, Brandies Theatre Bldg., Omaha, Neb., archts. CD 7/18/52.

▲ **Chalmers & Borton Contr. Co.,** Box 1031, Hutchinson, Kan., CA $5,440,000. 16,000,000 bu. GRAIN ELEVATOR, ENID, OKLA. Union Equity Assn., Enid, Okla. Awarded Sept. 25. CD 8/20.

D. D. Hairston & Assocs., 2305 Holliday Ave., Wichita Falls, Tex. Owner Builds. $500,000. 75 Negro HOUSING units, WICHITA FALLS, TEX. CD 9/30.

Spiegelberg Lumber, Laramie, Wyo., CA, $303,000, GYMNASIUM and AGRICULTURE BLDG., TORRING-

TON, WYO. School District No. 3, Goshen Co., Torrington, Wyo. Bids Aug. 20. CD 7/30.

FAR WEST

BIDS ASKED—BUILDINGS

▲ Wash., Renton—SCHOOL—B.A. 10/28. School District 403, Renton. 1 story, 113x185 ft., 75x185 ft., 76x71 ft., 160x186 ft., 19x75 ft., 75x127 ft., and 75x127 ft., reinf.-con. Junior High School bldgs. $1,250,000. Mallis & De Hart, Lyon Bldg., Seattle, Zone 4, archts. CD 11/11.

Calif., Modesto—COUNTY JAIL—B.A. 11/10—Stanislaus Co., Court House, Modesto, county jail, $887,990. Plans deposit $50. CD 6/2.

HEAVY CONSTRUCTION

LOW BIDS AND CONTRACTS

▲ † **Gunther & Shirley Co.**, and **E. V. Lane Corp.**, Palo Alto, Calif., LB, **$3,419,357**, est. $4,167,206, installing equipment and complete powerhouse at Chief Joseph Dam, Inv. 54-2, WASHINGTON, U.S. Eng., 4735 E. Marginal Way, Seattle, 4, Wash. Bids Sept. 29. CD 9/23.

† **L. W. Vail Co.**, Pasco, Wash., LB, **$157,687**, est. $169,788, b. conc. surf. streets, parking areas, concrete sidewalks, sprinkling systems, topsoil and seeding, sand stab., etc., Inv. 54-5, CAMP HANFORD, WASH., U.S. Eng., City-County Airport, Walla Walla, Wash. Bids Sept. 29. CD 8/26.

† **Atomic Energy Comn.**, Richland, Wash., cancelled bids to have been opened Sept. 29, 8-ft. diam. underground silica waste storage tank 40 ft. long and waste orig. RICHLAND, WASH. CD 9/3.

▲ OREGON—State Hy. Comn., Highway Bldg., Salem, **Rogers Constr. Co.**, 11760 N. E. Glisan St., Portland, Ore., CA **$592,870**, grading, 9.42 mi., Glenwood-North Plains Sect., Wilson River Hy. FAP BF-313 (1), Washington Co.;

Fred H. Slate Co. & E. C. Hall Co., 7805 S.W. 40 St., Portland, Ore., CA **$618,496**, grading, paving 3.23 mi., Elbow Lake-Gardiner Sect., Oregon Coast Hy. FAP BF-140 (9), Douglas Co.;

T. C. Wildish, Eugene, Ore., CA **$267,214**, grading, paving 2.68 mi. sect., 63 ft. concrete bridge, junction City-Eugene Sect., Pacific Hy. FAP BF-262 (9), Lane Co.;

Harbert Bros., Estacada, Ore., CA **$106,175**, grading, oiling 5.54 mi., Linn County Line-Coburn Sect., Eugene-Harrisburg Rd., FAP S-137 (1), Lane Co.;

R. A. Heintz Constr. Co., 211 N. E. Columbia Blvd., Portland, Ore., CA **$632,794**, grading 11.89 mi., Willamette River-Gervais Unit, Willamette River-Hayesville Sect., Portland-Salem Expressway, FAP BF-324 (6), Marion and Clackamas Counties;

J. R. Taggart, Salem, Ore., CA **$234,805**, grading, paving 4.32 mi., Ore Corner-Monmouth Sect., Pacific Hy. West, Polk Co.;

J. W. Briggs & Assoc., Bend, Ore., CA **$472,732**, grading, paving 12.62 mi., Bend-LaPine Sect., The Dalles-California Hy., FAP BF-108 (8), Deschutes Co.;

Porter W. Yett, 6500 N. E. Ainsworth St., Portland, Ore., CA **$1,058,604**, paving 14.2 mi., Divide-Rice Hill Sect., Pacific Hy., FAP BFI-189 (16), Douglas Co.; CA **$81,907**, grading, paving 1.25 mi., Rice Hill Sect., Pacific Hy., Douglas Co. Grand total $4,065,597. Bids Sept. 24. CD 9/16.

▲ CALIFORNIA—State Div. Hys., P. Wks. Bldg., Sacramento,

Chas. L. Harney, Inc., 575 Berry St., San Francisco, Calif., LB **$3,680,237**, portion of bridge freeway work 8 and 4 Sts., San Francisco, San Francisco Co. Bids Sept. 30. CD 9/21.

Misetich Bros., 4638 Tilden Ave., Sherman Oaks, Calif., LB, **$78,946**, sanitary sewers in Moorpark St. and Balboa Park Sewer District;

Colich Constr. Co., 701 Centinela Ave., Inglewood, Calif., LB, **$139,459**, sanitary sewers in Inglewood Blvd. and Braddock Dr. Sewer District, LOS ANGELES, CALIF., City, City Hall, Los Angeles, Calif. CD 6/4.

Dimmit & Taylor, 128 W. Pomona Ave., Monrovia, Calif., LB, **$156,765**, Westminister Drainage Channel, Unit 1, SANTA ANA, CALIF., Orange Co., 600 N. Broadway, Santa Ana, Calif. Bids Sept. 22. CD 9/4.

BUILDINGS

LOW BIDS AND CONTRACTS

† **Okland Constr. Co.**, 2683 Glenmare St., Salt Lake City, Utah, LB, **$433,000**, BOILER PLANT BLDG. 3, INCINERATOR BLDG. 110, Veterans Administration Center, WHIPPLE, ARIZ., Veterans Admin., Munitions Bldg., Wash., D. C. Bids Sept. 29. CD 8/26.

▲ **Carson Park Builders**, Box 8086, Long Beach, Calif., CA, $1,405,300, 368 stucco DWELLINGS, Keynote, Nipomo, Monogram, Ostram Sts., CARSON PARK, CALIF., Carson Park Mutual Homes No. 8, Box 8086, Long Beach, Calif.

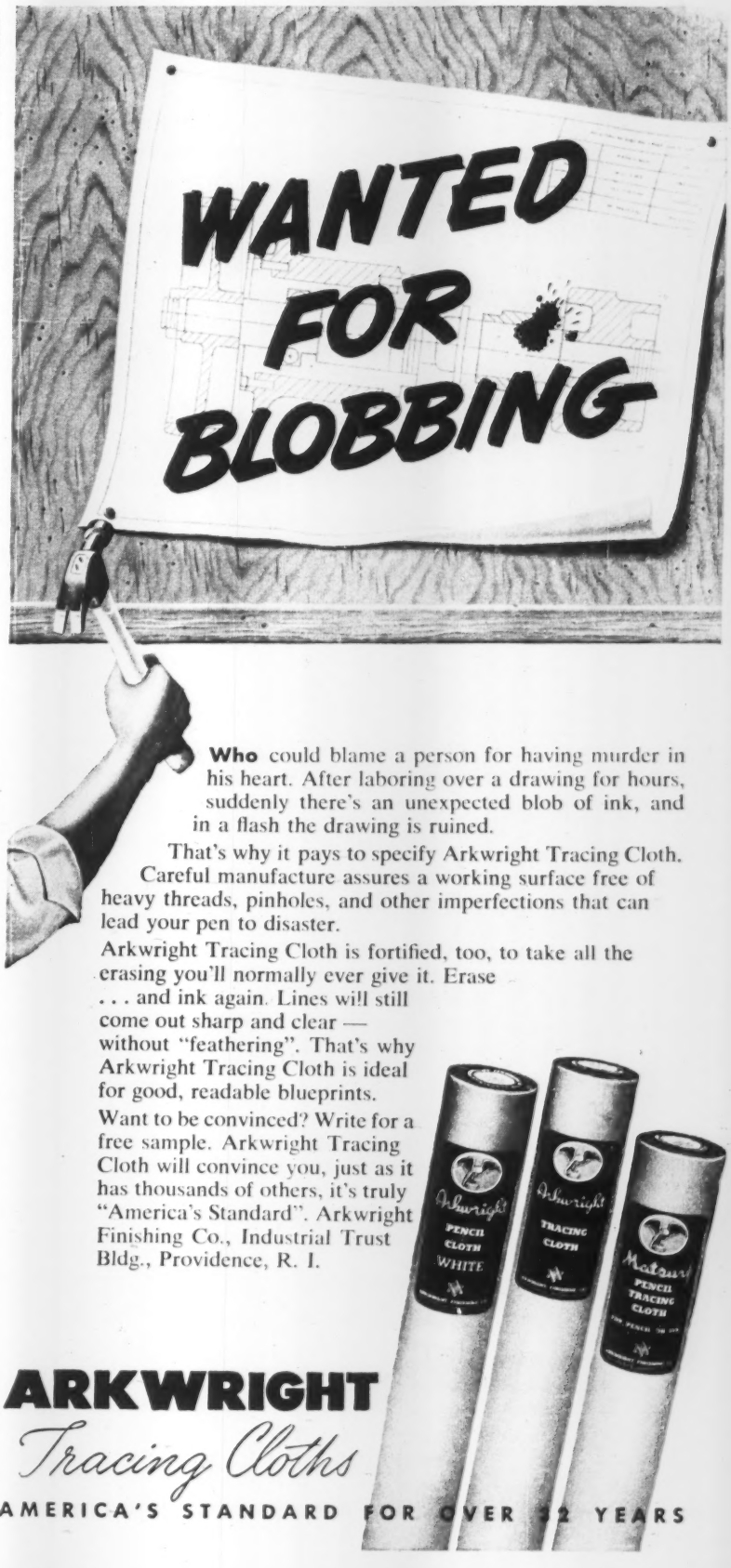
▲ **Zoss Constr. Co.**, 1037 N. Cole Ave., Los Angeles, Calif., CA $1,843,000, Richland Junior High SCHOOL, LOS ANGELES, CALIF., Bd. Educ., 1424 S. San Pedro St., Los Angeles, Calif. Bids Sept. 17. CD 9/23, under LB.

John W. Michael, 4473 Tweedy Blvd., South Gate, Calif., Owner Builds, $321,200, 41 frame, stucco DWELLINGS, Crossdale St., NORWALK, CALIF.

CANADA

BIDS ASKED—BUILDINGS

▲ Ont., London—WAREHOUSE—B.A. 10/20—Defence Constr. Ltd., 40 Eglinton Ave. E., Toronto, Zone 12,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warehouse No. 1, Job 2575, $1,250,000. Plans deposit $100. R. P. Ople, c/o owner, engr.

▲ Ont., Chatham—HOSPITAL—B.A. 10/28—Chatham Public General Hospital, Chatham, 4 story, bsmnt., steel, brick hospital addns. $1,500,000. Plans deposit $50. John B. Moore & Assoc. 21 Seventh St., Chatham, engrs. Govan, Ferguson, Lindsay Kaminker, Langley & Keenleyside, 515 Jarvis St., Toronto, archts. CD 5/13.

HEAVY CONSTRUCTION

LOW BIDS AND CONTRACTS

Foundation Maritime Ltd., 135 Lower Water St., Halifax, N. S. CA, $318,986, central heating plant, R.C.A.F. Station, GREENWOOD, N. S. Defence Constr. Ltd., 1032 Gottingen St., Halifax, N. S. Bids Aug. 11, awarded Sept. 15. CD 7/31.

Keystone Contractors Ltd., Barrie, Ont., CA, $228,015 sewage disposal plant, BARRIE, ONT. Municipality, Barrie, Ont. CD 11/17.

Hacquoil Constr. Ltd., 228 W. Gore St., Fort William, Ont., CA, $150,000. water mains, KENORA, ONT. Municipality Kenora, Ont. Bids July 20. CD 7/9.

BUILDINGS

LOW BIDS AND CONTRACTS

Bird Construction Co. Ltd., 1427 19 Ave. E. Calgary, Alta., CA, $360,000, concrete, steel, brick FACTORY, CALGARY, ALTA. Neon Zeon Products Ltd., Calgary, Alta.

Cameron Constr., Co., 171 Hollis St., Halifax, N. S., Owner Builds. $500,000, 50 concrete, brick DWELLINGS, Greenbank Ave., HALIFAX, N. S.

▲ **B. Perini & Sons Canada Ltd.,** 49 Jackes Ave., Toronto, Ont., CA, $1,250,000, 7 story, 107x219 ft., concrete, stone, brick OFFICE, Queen St. and University Ave., TORONTO, ONT. Dpt. P. Wks., Parliament Bldg., Toronto, ONT. Dpt. P. Wks., Parliament Bldgs., Toronto, Ont. Bids July 31, awarded Sept. 28. CD 7/16.

Rager Constr. Co., 6979 Querbes Ave., Montreal, Que., CA, $300,000, 44-suite concrete, brick APARTMENT Cote St. Luke Rd., MONTREAL, QUE. P. Colman, 6979 Querbes Ave., Montreal, Que.

Proposed Projects

WATER SUPPLY

Kan., Olathe—City Comn., $535,000 bond election Oct. 20, 170 acre lake cap. 1½ billion gal. for water source, Payne & Breckway, Olathe, consult. engrs. CD 8/28/52.

▲ **Tex., Corpus Christi**—City, City Hall, bond election of Sept. 30 held up, water storage, $1,500,000; WW sys. rehabilitation, $750,000; water distr. lines, $1,750,000; large water mains, $2,773,760; water transmission line, $1,650,000; water pumping plant, $875,000. Robert L. Otto, city engr. CD 9/22.

SEWERS, WASTE DISPOSAL

▲ **Calif., Watsonville**—City, City Hall, $1,865,000 bond election Nov. 3, sanitary and storm sewers.

▲ **Fla., Jacksonville**—City Comn., City Hall, master plan for sewer and drains in metropolitan area. $2,000,000. Metcalf & Eddy, 1330 Statler Bldg., Boston 16, Mass., and Reynolds, Smith & Hill, Box 4817, Jacksonville, consult. engrs. CD 8/6.

Fla., Marianna—City, sanitary sewerage imprvs. $500,000. Smith & Gillespie, P. O. Box 1048, Jacksonville, consult. engrs. CD 6/30/50.

Fla., Sanford—City, City Hall, sanitary sewerage imprvs. $719,000. Robert M. Angas, P.O. Box 358, Jacksonville, consult. engr. CD 3/11/46.

Fla., Stuart—City, sewage disposal system, $585,000. CD 2/5/45.

Mich., Saginaw—City, C. A. Miller, mgr., trunk sewer, drain relocation of State Hy. in southeastern sect. of city. $900,000. Spicer Eng. Co., 401 Court St., consult. engrs. CD 10/11/48.

▲ **Tex., Corpus Christi**—City, City Hall, bond election of Sept. 30 held up, disposal plant, $650,000; sanitary sewerage sys. rehabilitation, $750,000; sanitary sewer collection lines, $835,700; storm sewers, $600,000. Robert L. Otto, city engr. CD 9/22.

BRIDGES

▲ **CALIFORNIA**—State Div. Hys. & California Toll Bridge Auth., Public Works Bldg., Sacramento, **San Francisco and Oakland**—alterations and imprvs. to San Francisco-Oakland Bay Bridge, incl. imprv. Yerba Buena and Treasure Island connections, $350,000; lower deck lights, $700,000; toll plaza expansions, incl. grading, paving, etc., $2,500,000.

STREETS AND ROADS

▲ **MASSACHUSETTS**—Commonwealth of Mass., Dpt. P. Wks., 100 Nashua St., Boston,

Dedham—exten. Rte. 128 just west of Rte. 1-A (3.2 mi.), $5,000,000.

Dedham to Canton—Rte. 128 from Dedham to Canton line east of Neponset 3 mi., $4,000,000.

Needham—Rte. 128 south from Rte. 9 about 3.9 mi. to point just south of Great Plain Ave., $7,000,000.

RHODE ISLAND—State Purch. Agent, State House, Providence,

Hopkinton—highway, road relocation, 5.255 mi. grading Stage 2, Nooseneck Hill Rd. relocation. $800,000.

EARTHWORK, WATERWAYS

Tex., Kenedy—Karnes Soil Conservation Dist., c/o Roy Freeman, mgr., Kenedy (sponsors) constr. earthen dams to serve for flood prevention, $750,000.

PUBLIC BUILDINGS

▲ **Calif., Campbell**—SCHOOL—City, City Hall, $2,500,000 bond election Dec. 1, schools.

▲ **Calif., Los Angeles**—SCHOOL—Los Angeles Bd. Educ. 1425 S. San Pedro St., plans by Austin, Field & Fry, 2311 W. 3 St., Fernangeles High School, $1,600,000; plans by Rowland H. Crawford, 1464½ S. Doheny Dr., Beverly Hills, Girls Physical Educational Bldg., Venice High School, Venice, $310,000. CD 6/24.

Calif., Piedmont—SCHOOL—Piedmont City Unified School Dist., 800 Magnolia St., plans by John Carl Warnecke, 507 Howard St., San Francisco, Havens School addn. $700,000. CD 5/1.

▲ **Calif., San Rafael**—SCHOOLS—City, City Hall, $1,000,000 bond election Nov. 24, schools. CD 3/9/50.

▲ **Ill., Chicago**—SCHOOL—Bd. Educ., 228 N. La Salle St., Zone 1, plans by Perkins & Will, 309 W. Jackson Blvd., Zone 6, combination elementary and high school, 114 St. and Ave. "O", $3,000,000. CD 3/15/51.

▲ **Ill., Chicago**—OFFICE—Sanitary District of Chicago, 910 S. Michigan Ave., Zone 5, plans by Philip B. Maher, 157 E. Erie St., Zone 11, 4 story, 50,000 sq. ft. office bldg. $1,000,000.

▲ **Kan., Lawrence**—MUSIC and DRAMATIC ARTS—Bd. Regents University of Kansas, Lawrence, plans by Brinkman & Hagan, Emporia, and John Brown, state archt., State House, Topeka, music and dramatic arts bldg. $1,500,000.

▲ **La., Baton Rouge**—STATE CAPITOL—State Welfare Bd., State Capitol, plans by August Perez & Assoc., Audubon Bldg., New Orleans, 5 story granite, limestone state capitol annex, air conditioned, located east of Capitol Bldg., $1,800,000. CD 9/22.

▲ **Mich., Bloomfield Hills**—SCHOOL—Bloomfield Hills Bd. Educ., $1,390,000 bond election Nov. 3, brick, steel, concrete high school. CD 3/12.

▲ **N. J., Hillsdale**—SCHOOL—Pascack Valley Regional Bd. Educ., Hillsdale, regional high school, $1,250,000.

▲ **N. Y., Elmont**—SCHOOLS—Elmont School Bd., Elmont, 16-room school, Stewart Ave. near Covert Ave., $700,000; 10-room addn. to Alden Terrace School, Central Ave., $290,000; 8-room addn. to Gotham Ave. School, $210,000.

N. Y., Oceanside—SCHOOL—Bd. Educ., Union Free School Dist. No. 11, Town of Hempstead, Hempstead, elementary school, Moore and Fulton Aves. $800,000.

▲ **N. Y., Wantagh**—HIGH SCHOOL—Bd. Educ., Union Free School Dist. 23, Wantagh, Junior and Senior High School. $2,250,000.

O., Bedford—SCHOOLS—Bd. Educ., Bedford, voted bonds Sept. 22, elementary school and addnl. work on high school under constr. $800,000. CD 8/3.

▲ **O., Kent**—SCHOOL—Bd. Educ., Kent, 500-pupil high school. $1,750,000.

O., Lebanon—SCHOOLS—Bd. Educ., Lebanon, $960,000 bond election November 3, two grade schools. CD 11/11/48.

▲ **O., Willoughby**—SCHOOL—Bd. Educ., Willoughby-Eastlake School Dist., Willoughby, bond election Nov. 3, grade school, in Willowick and high school at undetermined site. $2,000,000.

▲ **Pa., New Bethlehem**—HIGH SCHOOL—Redbank Valley Joint School Dist., New Bethlehem, plans by Walter Rittenhouse, Bourts Bldg., Kittaning, brick, block, steel Junior-Senior High School. $2,300,000.

Pa., Rockwood—HIGH SCHOOL—Rockwood Joint School Dist., Rockwood, plans by Gordon C. Pierce, 219 S. Penna Ave., Greensburg, brick, steel Junior-Senior High School. $800,000.

Pa., Titusville—HIGH SCHOOL—Titusville Area Joint Schools, Titusville, plans by Freeburg & Linquist, 15 E. 4 St., Jamestown, N. Y., 2 story brick, block high school addn., alterations, $900,000.

▲ **S. C., Columbia**—STUDENT UNION—University of South Carolina, Columbia, plans by J. Carroll Johnson, c/o owner, student union bldg. $1,175,000. Robert L. Sumwalt, c/o owner, engr.

▲ **Tex., Fort Worth**—HIGH SCHOOL—Fort Worth Independent School Dist., 409 E. Weatherford St., plans by Preston M. Geren & A. George King, 819 Penn St., converting McLean Junior High School into Paschall High School, 2 story, 50 classroom, masonry constr. $1,525,600. CD 8/7/52.

▲ **Va., Quantico**—BARRACKS—P. Wks. Office, Potomac River Naval Command, Naval Gun Factory, Wash., D. C., plans by Merrill C. Lee, 601 E. Franklin St., Richmond, 2 story barracks, Marine Corps Schools. $1,500,000.

Alaska, Seward—HIGH SCHOOL—School Bd., Seward, reinf.-con., masonry high school. $951,000. CD 4/1/46.

▲† **Alaska, Whittier**—APARTMENT—U. S. Eng., Anchorage, 16 story apartment $6,000,000. CD 11/26.

▲ **Que., Montreal**—UNEMPLOYED INSURANCE OFFICES, etc.—Dpt. P. Wks., Hunter Bldg., Ottawa, Ont., plans by Jean Julien Perrault, 3737 Van Horne Ave., federal government building, unemployed insurance office, Urbain St. between St. Catherines and Demontigny Sts., $1,500,000-$2,000,000.

▲ **Que., Quebec City**—SCHOOL—Province of Quebec Dpt. of Youth & Social Welfare, Quebec City, plans by M. Mainguy, 565 St. John St., 4 story, 56x212 ft., rein.-con., brick, stone, V-shoped school, $1,000,000. Tasse & Assocs., 70 St. Paul St., consult. engrs.

COMMERCIAL BUILDINGS

▲ **Calif., Garden Grove**—DWELLINGS—Lansdale Constr. Co., 12017 Paramount Blvd., Downey, plans by L. C. Major & Assoc., 11015 S. Paramount Blvd., Downey, 298 frame, stucco dwellings, Brookhurst and Chapman Aves. $3,000,000.

▲ **Kan., Mission**—HOUSING—A. C. Langworthy, 3415 W. 63 St., Prairie Village, Milburn Fields 25 acre housing development, 71-72 Terrace and Conser Dr. Mission Twp. $1,500,000.

▲ **Mo., Independence**—RESIDENCE SUBDIVISION—Samuel Edmunds, Independence, 130 residence subdivision in southwest part of town, $1,500,000.

▲ **Nev., Reno**—HOTEL, etc.—Owner, c/o Gearhart, Holmes & Assts., archts., 600 N. Sepulveda Blvd., West Los Angeles, Calif., hotel and casino. $3,500,000.

N. Y., Brooklyn—APARTMENT—Coleridge Building Co., Inc., c/o Seelig & Finkelstein, archts., 153 Pierrepont St., Zone 2, 6 story apartment, 1833-1851 Ocean Ave. $800,000.

▲ **N. Y., Johnstown**—SHOPPING CENTER—Philip J. Levin, 104 W. 4th St., Plainfield, N. J., plans by Joseph Margolis, 2206 S. James St., Phila, Pa., shopping center $1,000,000.

▲ **N. Y., New York**—OFFICE, etc.—**General Realty & Utilities Corp.,** 285 Madison Ave., Zone 17, plans by Sidney Goldstone, 285 Madison Ave., Zone 17, 9 story office and warehouse bldg. on block bounded by W. 43 and W. 44 Sts., 11 and 12th Aves. $15,000,000.

▲ **R. I., Burrillville and Gloucester**—CONFERENCE CENTER—Episcopal Diocese of Rhode Island, Rev. Henry B. Krusen, chn., 12 Central St., Central Falls, plans by Richard C. Neibuhr, 75 Park Pl., Pawtucket, and Milton E. Nelson, 1015 Turks Head Bldg., Providence, assoc. archts., Episcopal Conference Center, new chapel, assembly hall, 2 classroom bldgs., dining bldg. sta bldg., and 8 dormitories. $3,000,000.

▲ **Tex., Pasadena**—APARTMENT, etc.—Leo F. Corrigan Interests, Mercantile Bank Bldg., Dallas, plans by Wyatt C. Hedrick, consult. engr.-archt., 5201 Fannin St., Houston, 30 unit addn. to existing "Park Lane" apartments, masonry constr. $300,000; shopping center expansion, $1,000,000.

▲ **Va., Richmond**—SHOPPING CENTER—Willow Law Corp., 114 S. 6 St., plans by J. Albert Heisler, 3 W. Cary St., shopping center. $5,500,000.

▲ **Wash., Seattle**—SHOPPING CENTER—Market St. Property Co., c/o M. L. Bean, 1620 Windemere Dr. plans by Decker & Christenson, 1411 4 Ave. Bldg., Zone 1, shopping center, $1,000,000.

▲ **Ont., Lindsay**—HOSPITAL—Ross Memorial Hospital Bd., Dr. W. Service, chn., hospital, $1,300,000. Neergaard, Agnew Craig, 134 Bloor St. W., Toronto, consult. engrs. CD 8/28.

▲ **Que., Montreal**—OFFICE—Zed Corp., 1113 Castle Bldg., 1410 Stanley St., plans by A. Schrier, 4147 Sherbrooke St. W., 10 story, 150x120 ft., steel office, Mountain St. $2,000,000.

INDUSTRIAL BUILDINGS

▲ **Mich., Marquette**—POWER PLANT—Cliffs Power & Light Co., Ishpeming and Upper Peninsula Power Co., 16 Sheiden Ave., Houghton, 22,000 kw. steam generating power plant, near Lake Superior, $1,000,000.

▲ **O., Dayton**—FACTORY—Chrysler Corp., Airtemp Div., 1600 Webster St., 1 story, 180x580 ft. plant addn., north of present plant for assembling heating and air-conditioning units; "open storage" facility with 83,000 sq. ft. warehouse space, cement slab and roof, craneway, all utilities, with south and east walls to be built later when/if more factory space is needed. $2,000,000.

▲ **Pa., Shiremanstown**—WAREHOUSE—Quaker Oats Co., Merchandise Mart Plaza, Chicago, Ill., 160,000 sq. ft. warehouse, Railroad St. $3,000,000.

▲ **Tex., Dallas**—WAREHOUSE—Associated Wholesale Grocery of Dallas, 4814 Cass St., 400,000 sq. ft. warehouse in new Brook Hollow Industrial Dist. $3,250,000.

▲ **Tex., Dallas**—INDUSTRIAL PLANT—Strauss-Frank Co., 301 S. Flores St., San Antonio, 200,000 sq. ft. masonry industrial plant, in area of Brook Hollow Industrial Center. $1,750,000.

▲ **Tex., Howe**—PLANT—Stanley Fogarty Co., Hayti, Mo. anhydrous ammonia fertilizer distribution plant. $1,250,000.

UNCLASSIFIED

Indiana and Illinois—RACE TRACK—Tom Bourke, 2422 E. 74 St., Chicago, Ill., plans by Byron Jillson, 820 Broad St., Beloit, Wis., Shamrock Race Track and grand stand on site of former Ford Airport on boundary line of Illinois and Indiana, $600,000.

O., Rocky River—SWIMMING POOL—City, City Hall, 19120 Detroit Rd., bond election Nov. 3, swimming pool. $500,000.

Okla., Bartlesville—FAIR GROUNDS—Washington County Fair Bd., Bartlesville county fair grounds, incl. bldgs., parking areas, etc. $500,000.

Texas—RURAL TELEPHONE LINES—Comanche County Telephone Co-operative Assn., Comanche, 498 mi. new rural pole telephone lines, rebuild 100 mi. acquired lines, Comanche Co. $660,000.

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Bids—Low Bids—Contracts—Second Section

NEW ENGLAND

BIDS ASKED—HEAVY CONSTRUCTION
STATE HIGHWAY LETTINGS
STREETS AND ROADS
October 20, November 3 Massachusetts

BIDS ASKED—BUILDINGS

Mass., Worcester—BAKERY—B.A. 10/23—Table Talk Pastry Co., Inc., 153 Green St., (selected list bidders), 90x100 ft., steel, masonry bakery addn., incl. 2 large freezers, $500,000. E. Whitehead, Inc., 97 Webster St., engr. CD 2/3.

Conn., Rocky Hill—SCHOOL—B.A., 10/27—Town, School Bldg. Comn., Bd. Educ., Center School, Elementary and Junior High School, Chapin Ave. site, $800,000. Plans deposit $50. Nichols & Butterfield, 967 Farmington Ave., West Hartford, archts. CD 3/18.

Conn., Ridgefield—SCHOOL—B.A. 11/9—Town, Bd. of Educ., Town Hall, elementary school, Lounsbury Property, $500,000. Seelye, Stevenson & Value, 101 Park Ave., New York, N. Y., structural engrs. Sherwood Mills & Smith, 65 Broad St., Stamford; archt. CD 7/1.

HEAVY CONSTRUCTION

LOW BIDS AND CONTRACTS

Hayes Constr. Co., 1285 East St., New Britain, Conn., CA $719,800 incinerator plant, Berlin Site, NEW BRITAIN, CONN. Bd. P. Wks., New Britain, Conn. Bids Sept. 14. CD 9/18, under LB.

BUILDINGS

LOW BIDS AND CONTRACTS

▲ **A. E. Stephens Co.,** 1200 Main St., Springfield, Mass., CA, $2,807,900, Elementary and Junior High SCHOOLs, King Philip Dr., WEST HARTFORD, CONN. Town, Supt. Schools, Memorial Rd., West Hartford, Conn. Bids Sept. 25. CD 10/2, under LB.

Massacoe Builders, Inc., Meadow Plains Rd., Simsbury, Conn. LB, $511,774 elementary SCHOOL, WINDSOR LOCKS, CONN. Town Bd. Educ., Windsor Locks, Conn. Bids Sept. 30. CD 9/23.

MIDDLE ATLANTIC

BIDS ASKED—HEAVY CONSTRUCTION
STATE HIGHWAY LETTINGS
BRIDGES
October 23 Pennsylvania
October 29 New Jersey, New York
STREETS AND ROADS
October 20 Maryland October 22 New Jersey
October 23 Pennsylvania October 29 New York

BIDS ASKED—BUILDINGS

▲ **N. Y., New York**—COLLEGE OF MEDICINE—B.A. 10/19—Yeshiva University, 270 Park Ave., 10 story, brick, glass teaching and research center, library and admin. bldg., auditorium and power plant for Albert Einstein College of Medicine. $10,000,000. Plans deposit $50. Kelly & Gruzen, 80 Park Ave., Zone 3, archts. CD 8/24/52.

▲ **N. J., Mahwah**—ASSEMBLY PLANT—B.A. 10/22—Ford Motor Co., Rouge Plant, 3000 Schaefer St., Dearborn, Mich., brick, steel, glass assembly plant, $30,000,000. Giffels & Vallet, Inc., 1000 Marquette Bldg., Detroit, Mich., engr. and archt. CD 5/11.

▲ **N. Y., New York**—HOUSING—B.A. 10/27—New York City Housing Auth., 63 Park Row, Zone 38, foundations, and general constr., heating and ventilating, electrical work, plumbing, furnishing, installing elevators for LaGuardia Houses, Proj. No. NY-5-21, Sect. 1, incl. Bldgs. 4, 5, 7 and 9, in areas in Manhattan Boro, in block bounded by Montgomery, Monroe, Clinton and Madison Sts.; Bldg. 5 in easterly half of block bounded by Madison, Clinton, Monroe and Jefferson Sts.; and Bldg. 4 in easterly half of block bounded by Monroe, Clinton, Cherry and Jefferson Sts. Plans deposit $75, $25, elevators. Extended date. CD 9/28.

HEAVY CONSTRUCTION

LOW BIDS AND CONTRACTS

▲ **Merritt-Chapman & Scott Corp.,** 260 Madison Ave., New York 6, N. Y., CA $5,296,555, Contr. Rte. 1196 (Rockaway Route), Jamaica Bay Crossing, substructure and low trestle deck from North Channel to Beach Channel, Queens Co., JAMAICA, N. Y. New York City Transit Auth., 370 Jay St., Brooklyn 1, N. Y. Bids Oct. 2. CD 10/6, under LB.

▲ **Hendrickson Bros., Inc.,** 63 No. Central Ave., Valley Stream, N. Y., CA $2,546,845, lateral sewers, Woodmere-Hewlett-Valley Stream Dist. 2, MINEOLA, N. Y. Bd. Supervs. Nassau Co., Old Court House, Mineola, N. Y. Bids Sept. 22. CD 10/1, under LB.

NEW JERSEY—New Jersey Hy. Auth., State Hy. Office Bldg., 1035 Parkway Ave., Trenton.

Elizabeth Iron Works, Green Lane, Elizabeth, N. J., LB, $501,866, Contract 125, furnishing, erecting steel bridge railings between Raritan River and Main St. in Paterson, Middlesex, Essex and Passaic Counties. Bids Oct. 5. CD 9/21.

NEW JERSEY—New Jersey Hy. Auth., State Hy. Dpt. Office Bldg., 1035 Parkway Ave., Trenton.

Verona Constr. Co., 251½ Grove Ave., Verona, N. J., LB, $968,740, Contract 149, drainage and incidental paving for Garden State Parkway from Park to Rutledge Aves., East Orange and from Montgomery St. to Second River in Bloomfield, Essex Co. Bids Oct. 5. CD 9/21.

▲ **NEW JERSEY**—New Jersey Hy. Auth., State Hy. Dpt. Office Bldg., 1035 Parkway Ave., Trenton.

Union Bldg. & Constr. Corp., 631 Main Ave., Passaic, N. J. CA, $2,588,381, Contract 57, grading, drainage, paving, bridges 1.894 mi. Garden State Parkway, from 1,200 ft. south of Essex-Passaic Co. line to Van Houten Ave., Essex and Passaic Counties. Bids Sept. 21, awarded Oct. 1. CD 9/24, under LB.

▲ **NEW JERSEY**—New Jersey Hy. Auth., State Hy. Dpt. Office Bldg., 1035 Parkway Ave., Trenton.

Reid Contg. Co. Inc., P.O. Box 215, Woodbridge, N. J., CA, $1,590,044, Contract 82, paving 12.7 mi. Garden State Parkway from State Hy. Route 9 to Monmouth Co. Route 524N, Monmouth and Ocean Counties. Bids Sept. 10, awarded Sept. 29. CD 9/15, under LB.

▲ **NEW JERSEY**—New Jersey Hy. Auth., State Hy. Dpt. Office Bldg., 1035 Parkway Ave., Trenton.

Frank Stamato & Co., 284 Main St., Lodi, N. J., LB, $3,589,279 Contract 22, grading, drainage, paving, structures 3.3 mi. Garden State Parkway from Belleville Ave. to 1,200 ft. south of Passaic Co. line, Bloomfield and Nutley, Essex Co. Bids Sept. 28. CD 9/2.

▲ **NEW JERSEY**—New Jersey Hy. Auth., State Hy. Dpt. Office Bldg., 1035 Parkway Ave., Trenton.

Cayuga Foundation Corp., 30 Vesey St., New York, 7, N. Y., CA, $2,580,355, Garden State Parkway, Contract 58, demolition, grading, street paving drainage and structures from south of Ney Ave. to north of Springfield Ave., Town of Irvington, Essex Co.;

Lizza & Sons, Inc., E. Norwich Rd., Oyster Bay, N. Y., CA $2,524,467, Contracts 83 and 85, paving 20.9 mi. Garden State Parkway, from Westecunk Creek to Dover Rd., Ocean Co. Bids Sept. 3, awarded Oct. 1. CD 9/9, under LB.

MARYLAND—State Rds. Comn., 108 E. Lexington St., Baltimore.

T. B. Gatch & Sons, Inc., 5928 Belair Rd., Baltimore, Md. LB $113,804, resurf. 4.86 mi. of 3 sections incl. 0.89 mi. Main St. in Belair from Bond St. to east own limits, 1.53 mi. State Rte. 24 beginning at U.S. Rte. 40 exten. southeasterly to Edgewood; 2.44 mi. State Rte. 152 beginning at U.S. Rte. 40 and exten. southeasterly to Magnolia, Harford Co.;

F. P. Asher & Sons, Inc., 1715 West Exten., Annapolis, Md. LB $664,148, constr. 2.35 mi. divided hy. along relocated U.S. Rte. 40 between Ridgeville and Frederick beginning at point 0.4 mi. east of Ijamsville exten. westerly to Monocacy River, Frederick Co. Bids Oct. 6. CD 9/23.

BUILDINGS

LOW BIDS AND CONTRACTS

▲ **Rapone & Beck,** c/o Teas & Steinbrenner, archts., Homeland Bldg., Malverne, N. Y. Owner Builds. $3,000,000. 200 HOUSES on tract on Hicksville Rd., BETHPAGE, N. Y.

Gildo Pavan, c/o Alwin Cassens, Jr., archt., 145 S. Franklin Ave., Valley Stream, N. Y. Owner Builds. $750,000. 70 HOUSES on tract on Stewart Ave., BETHPAGE, N. Y.

Samuel J. Lefrak, 97-27 64 Rd., Forest Hills, N. Y. Separate Contracts, $588,000, 6 story APARTMENT, 3864-3916 Kings Hy., $336,000, 6 story apartment, 2011-23 E. 41 St., BROOKLYN, N. Y. CD 11/26.

Mogo Constr. Corp., 44 Court St., Brooklyn 2, N. Y. Separate Contracts, $588,000, 6 story APARTMENT, 8001-23 16 Ave., BROOKLYN, N. Y. CD 11/12.

Goli Constr. Corp., 44 Court St., Brooklyn 2, N. Y. Separate Contracts, $630,000, 6 story APARTMENT, 3013-43 Ocean Ave., BROOKLYN, N. Y. CD 11/12.

▲ **Salem Ridge at Huntington Homes,** c/o Matern & York, archts., 90-04 161 St., Jamaica, N. Y. Owner Builds. $3,000,000. 125 HOUSES on tract at Greenlawn and Oldfield Rds., HUNTINGTON, N. Y.

Joseph Bisceglia & Sons, Inc., Memorial Pl., Manhasset, N. Y., CA $800,000. Hawthorne SCHOOL, MASSAPEQUA, N. Y. Bd. Educ., Union Free School Dist. 23, Massapequa, N. Y. Bids Sept. 10. CD 9/1.

▲ **Caristo Constr. Corp.,** 26 Court St., Brooklyn 2, N. Y., LB $2,216,000, general contract JUNIOR HIGH SCHOOL 167 (formerly P.S. 86), E. 76 St., between 2nd and 3rd Aves., Manhattan Boro, NEW YORK, N. Y. Bd. Educ., 49 Flatbush Ave. exten., Brooklyn 1, N. Y. Bids Oct. 6. CD 9/8.

Colmar Constr. Co., 364 Gold St., Brooklyn 1, N. Y. LB $964,000, constr. new OUT-PATIENT DPT. addn., altering existing OUT-PATIENT DPT., NEW GARAGE and STOREHOUSE at Lincoln Hospital, E. 141 St. and Wales Ave., Bronx Boro, NEW YORK, N. Y. Dpt. P. Wks., Municipal Bldg. New York 7, N. Y. Bids Oct. 7. CD 9/24.

▲ **Wakefield Terrace Apartments,** c/o Morris Rothstein & Sons, archts., 186 Joralemon St., Brooklyn 2, N. Y. Owner Builds. $1,500,000. 6 story APARTMENT, for 202-families, 232 St. between White Plains Rd. and Barnes Ave., NEW YORK, N. Y.

▲ **Wigton-Abbott Corp.,** 1225 South Avenue, Plainfield, N. Y., CA $1,500,000. Design and construct 1 story RESEARCH BLDG., adjacent to existing mfg. plant, NORWICH, N. Y. Norwich Pharmacal Co., Norwich, N. Y.

▲ **Walter Kidde Constructors, Inc.,** 140 Cedar St., New York, N. Y., LB, $4,104,000, general contract; **Leigh Structural Steel Co.,** 17 Battery Pl., New York, N. Y., LB, $1,081,000 structural steel and misc. iron;

James H. Merritt & Co., 11-1134 Ave. Long Island City, N. Y. $679,976, plumbing;

August Arace & Son, Inc., 624 3 Ave., Elizabeth, N. J. LB $1,269,283, heating, ventilating, air conditioning.

Beach Electric Co., Inc., 18 Springdale Ave., East Orange, N. J., LB, $727,787, electrical work;

Watson Elevator Co.; Inc., 407 W. 36 St., New York, N. Y. LB, $522,860, elevators, for 17 story HOSPITAL, NEWARK, N. J. Dpt. P. Affairs, City Hall, Newark, N. J. Bids Oct. 6. CD 9/14.

Navarro Corp., 6219 Broad St., Pittsburgh, Pa., CA $500,000. 1 story bsmnt., 62x169 ft., brick CHURCH, ERIE, PA. Holy Rosary Roman Catholic Congregation, 2701 East Ave., Erie, Pa. CD 11/13.

▲ **M. A. Paul,** 4972 Liberty Ave., Pittsburgh, Pa., CA Est. $2,000,000. 1 story, brick, block, steel SHOPPING CENTER, GREENSBURG, PA. Murray Shopping Center, Inc., Standard Life Bldg., Pittsburgh, Pa. CD 9/10, under CA.

Dill Constr. Co., Marcia and Alyce Sts., Latrobe, Pa. CA $500,000. 1 and 2 story, 154x263 ft. brick, block, steel WAREHOUSE and GARAGE, near Lincoln Heights, JEANNETTE, PA. West Penn Power Co., 14 Wood St., Pittsburgh, Pa. Bids Sept. 24. CD 9/29.

Uniontown Constr. Co., 144 E. Main St., Uniontown, Pa. CA $628,000, general constr. 2 story GYMNASIUM and AUDITORIUM addn. to high school, UNIONTOWN, PA. Bd. Educ., Uniontown, Pa. Bids Sept. 3, awarded Sept. 26. CD 8/18.

Garden Constr. Co., 2406 Greenmount Ave., Baltimore, Md. LB $831,754, est. $750,000. Cross Country Blvd. Elementary SCHOOL, BALTIMORE, MD. City Bureau Bldg. Constr., 410 Municipal Bldg., Baltimore 2, Md. Bids Sept. 30. CD 9/16.

Guild Homes, Inc., 4411 Towanda Ave. Baltimore, Md. Owner Builds. $612,000, 36 brick HOMES, 1400 blocks, Albans Rd., Morris Ave. and Harden Lane, Church Hill sect., BALTIMORE, MD.

▲† **Regent Contg. Co.,** 1122 19 St. N.W., Wash., D. C. LB $1,068,100. PLANT SCIENCE BLDG. C-1, SOILS PREPARATION BLDG. C-2B, and CLASSIFIED BLDGS., CAMP DETRICK, MD. U. S. Eng., First and Douglas Sts. N.W., Wash. 25, D. C. Bids Oct. 6. CD 9/9.

Morrow Bros., Inc., 2315 N. Charles St., Baltimore, Md. LB $695,000. brick, block, steel Oakleigh Elementary SCHOOL, Baltimore, TOWSON, MD. Baltimore Co., Bd. Educ., Aigburth Rd., Towson, Md. Bids Oct. 1. CD 9/16.

SOUTH

BIDS ASKED—HEAVY CONSTRUCTION
STATE HIGHWAY LETTINGS
BRIDGES
October 23 Kentucky
STREETS AND ROADS
October 21, 27 Louisiana October 23 Kentucky

BIDS ASKED—BUILDINGS

S. C., Columbia—WARD—B.A. 10/29—South Carolina State Mental Health Comn., State Capitol, two addnl. ward bldgs. at State Hospital. $750,000. Plans deposit $100. Lafaye, Fair, Lafaye & Assocs., 1226 Sumter St., archts.

Ga., Dalton—SCHOOL—B.A. 11/17—Whitfield Co. Bd. Educ., Dalton, Valley Point High School, $500,000. CD 3/28/52.

▲ **Ga., Alma**—SCHOOL—B.A. 12/1—Bacon Co. Bd. Educ., Alma, (1) White elementary-high school $500,000 (2) Negro elementary-high school, $500,000 Plans deposit $50. each. McDonald & Co., Walton Bldg., Atlanta, archts. CD 8/27/52.

SOON LETS CONTRACT—BUILDINGS

▲ **Miss., Jackson**—PLANT—Century Mfg. Co., c/o John L. Turner & Assoc., archts., Medical Bldg., soon lets contract plant, $1,500,000. Plans deposit $30. CD 6/11.

HEAVY CONSTRUCTION

LOW BIDS AND CONTRACTS

▲ **VIRGINIA**—State Hy. Dpt., 1221 E. Broad St., Richmond.

Ames & Webb, Inc., P.O. Box 4001, Broad Creek Village, Norfolk, Va., CA $686,389, c. conc. widn., bit. top 1.87 mi. Hampton Blvd., Rte. 337, Norfolk, Proj. 4764-03, Norfolk Co.;

Robert T. Main Co., 1201 Florida St., Salem, Va., CA $656,724, two and four-lane b. conc. and bridge 7.06 mi. Rte. 360, Proj. 2320 13-14-15, Chesterfield Co.;

Adams Constr. Co., 2725 Roanoke Ave., Roanoke, Va., CA $433,587, b. conc. base, bit. top and 2 bridge 3.89 mi. Rte. 301, Emporia, Proj. 1840-05-06-07, Greensville Co. Grand total $1,776,700. Bids Sept. 17. CD 9/23, under LB.

VIRGINIA—State Hy. Dpt., 1221 E. Broad St., Richmond,

McLean Contg. Co., 1301 Fidelity Bldg., Baltimore 1, Md., CA $571,417, Contr. No. 1-A, grading, approach roadway and substructure for approach spans of bridge, Greys Point and Whitestone, Proj. 5469-01, Rte. 200, Middlesex and Lancaster Counties. Bids Sept. 24. CD 9/30, under LB.

▲† **William H. Singleton Co., Inc.,** P.O. Box 392, Hampton, Va., LB $1,394,473, freonization sys., L-5380, LANGLEY FIELD, VA. National Advisory Committee for Aeronautics, Langley Field, Va. Bids Sept. 29. CD 9/11/52.

WEST VIRGINIA—West Virginia Turnpike Comn., 1340 Wilson St., Charleston, Zone 5.

Bates & Rogers Constr. Corp., 600 West Jackson Blvd., Chicago, 6, Ill., LB, **$589,165,** Contract 37, rein.-con. bridge deck on steel superstructure of 3 major bridges and incl. erection of pipe railings, placing anchor bolts for lighting standards, furnishing, installing lighting conduits and pull boxes on 2 of bridges and incidental constr. Bluestone River Bridge located at about Mile 9 near Eads Mill in Mercer Co. The Fourmile Fork Bridge is located about Mile 68 near Standard and the Kanawha River Bridge is located about Mile 85 near Reed both in Kanawha Co. Bids Oct. 6. CD 9/14.

▲ WEST VIRGINIA—West Virginia Turnpike Comn., 1340 Wilson St., Charleston, Zone 5.

J. B. Michael & Co., Inc., P.O. Box 5895, Crosstown Station, Memphis, Tenn., LB, **$4,386,691,** concrete; **$3,502,090** asphalt, Contract 29, paving, drainage, incl. concrete curbs, gutters, toll plaza, etc. Mile 0 to 20 Alternate 1, rigid cement concrete paving and Alternate 2, flex. b. conc. paving, Mercer and Raleigh Counties. Bids Oct. 6. CD 9/21.

BUILDINGS

LOW BIDS AND CONTRACTS

† **McKoy-Helgerson Co.**, P.O. Box 57, Greenville, S. C. CA **$963,756,** HELIPORT, WAREHOUSE, hangar and SHOPS, ADMIN. and OPERATIONS BLDG. and utilities. ENG-44-110-53-3, FORT EUSTIS, VA. U. S. Eng., foot of Front St., Norfolk, Va. Bids Sept. 24. CD 9/29, under LB.

Lawrence Constr. Co., 2503 St. Paul St., Baltimore, Md., CA, **$882,642,** CHURCH, CLARKSBURG, W. VA. First Methodist Church, Clarksburg, W. Va. CD 9/27/51.

Ruscon Constr. Co., P. O. Box 275, Charleston, S. C. CA **$552,543,** HOSPITAL addn., ORANGEBURG, S. C. Orangeburg Regional Hospital, Orangeburg, S. C. Bids Sept. 22. CD 9/30, under LB.

Culpepper & Edwards, Pelham, Ga. CA, **$953,000** Consolidated SCHOOL, CAMILLA, GA. Mitchell Bd. Educ., Camilla, Ga. Bids Oct. 2. CD 10/7, under LB.

Coogan & Beatty, 435 Hialeah Dr., Hialeah, Fla., Owner Builds. **$600,000,** 75 RESIDENCES, FORT LAUDERDALE, FLA.

H. L. Long, 220 Collier Arcade, Fort Myers, Fla., CA, **$548,956,** HOSPITAL addn., FORT MYERS, FLA. Lee Memorial Hospital, Fort Myers, Fla. Bids Sept. 29. CD 9/14.

Arthuer Perry Inc., 1746 E. Adams St., Jacksonville, Fla., CA, **$546,350** OFFICE, JACKSONVILLE, FLA. State Farm Mutual Insurance Co., Bloomington, Ill. CD 9/30, under LB.

▲ **Geo. D. Auchter Co.**, foot of E. 56 St., Jacksonville, Fla. LB, **$1,196,877,** Southside generating electric station addn., JACKSONVILLE, FLA. City, City Hall, Jacksonville, Fla. Bids Oct. 1. CD 8/25.

▲ **Grinnell Co.**, Highland Ave., Atlanta, Ga., CA, **$1,325,000,** power plant piping at Southside and Talleyrand generating stations, JACKSONVILLE, FLA. City, City Hall, Jacksonville, Fla. Bids Aug. 27 CD 8/21.

W. K. Upchurch Constr. Co., Farm Security Bldg., Montgomery, Ala., CA, **$654,760,** MUSIC SPEECH BLDG., TUSCALOOSA, ALA. University of Alabama, Tuscaloosa, Ala. Bids Sept. 22. CD 9/30, under LB.

▲ **J. A. Jones Constr. Co.**, Box 10126, Jefferson Branch, New Orleans, La. LB **$1,508,311.** 5 story, concrete Lakeshore APARTMENT, Lakeshore Parkway, NEW ORLEANS, LA. Norris Development Co., 822 Perdido St., New Orleans, La. Bids Oct. 1. CD 9/9.

▲ **Huber, Hunt & Nichols, Inc.**, Speedway, Indianapolis, Ind. LB Est. **$1,000,000.** superstructure Louisville Assembly PLANT No. 2, LOUISVILLE, KY. Ford Motor Co., 3000 Schaefer St., Dearborn, Mich. Bids Sept. 29. CD 9/3.

F. W. Owens Co., 119 N. Fifth St., Louisville, Ky. CA **$572,340.** Wayne Waggener SCHOOL, St. Matthews, LOUISVILLE, KY. Jefferson Co. Bd. Educ., W. Jefferson St., Louisville, Ky. Bids Sept. 24, awarded Sept. 26. CD 9/29, under LB.

▲ **Bass, O'Brien & Padgett**, 283 Scott St., Memphis, Tenn., CA **$2,049,033,** Negro TEACHING HOSPITAL, MEMPHIS, TENN. City, City Hall, Memphis, Tenn. Bids Sept. 29. CD 10/6, under LB.

MIDDLE WEST

BIDS ASKED—HEAVY CONSTRUCTION
STATE HIGHWAY LETTINGS
BRIDGES
October 20, 28 Michigan
STREETS AND ROADS
October 28 Michigan

Ind., Beech Grove—B.A. 10/21—Bd. P. Wks., E. Allen Hunter, mayor, Beech Grove, sewage treatment plant and sewerage sys. $550,000. Bids 9/1 rejected. Couch Co., 230 E. Ohio St., Indianapolis, Zone 4, consult. engr. CD 8/12.

Mich., Bay City—B.A. 10/26—City, C. F. Jablonski, mgr., water mains, river crossings, 10,725 ft. 24 in. c.i. mech. joint pipe, 2,485 ft. and 20 and 30 in. steel pipe in 2 river crossings, $750,000. Plans deposit $25 refundable, Ayres, Lewis, Norris & May, 500 Wolverine Bldg., Ann Arbor, engrs. CD 1/12.

BIDS ASKED—BUILDINGS

Mich., Grosse Pointe—SCHOOL—B.A. 10/20—Detroit University & Country Day School, Grosse Pointe, brick, steel school, West Seven Mile Rd. $700,000, Lein-

Stabilization for 1/3 of a cent a square yard*

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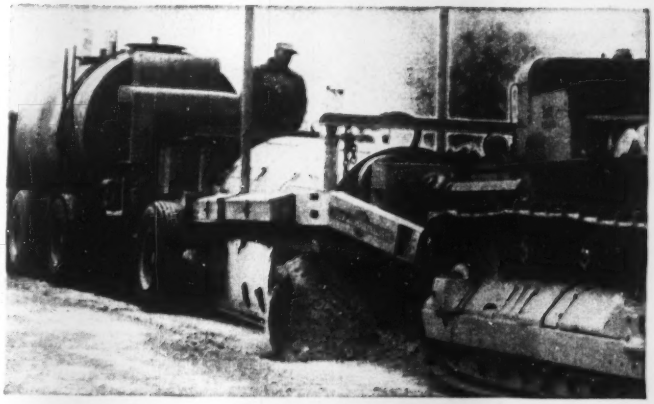

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2½ HP (continuous duty rating) Universal Motor provides more than ample power for uninterrupted placing of the stiffest mixes using the maximum length of shaft.

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Wherever either 115 volt, 60 cycle single phase AC or Direct Current is available, this relatively inexpensive vibrator will do a bang-up job of concrete placement.

28 FOOT REACH:
Available with any length of shaft up to 28 feet. Maximum length makes hard-to-get-to places readily accessible — saves time by making frequent changes of vibrator location.

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Double grip, skid-base handle with finger-tip control switch. Weighs only 50 lbs. Finest, smooth-running flexible shaft and fittings — built to take the most severe usage.

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weber, Yamasaki & Hellmuth, 112 Madison St., Detroit, archts.

▲ Ill., Lake Forest—SCHOOL—B.A. 11/3—School District 67, 400 E. Illinois St., West Deerpath Grade School, bus garage and gymnasium, $1,385,000. Childs & Smith, 20 N. Wacker Dr., Chicago, Zone 6, archts. CD 3/9.

Ill., La Grange—SCHOOL, etc.—B.A. 11/10—St. Francis Xavier School, 145 N. Waiola Ave., 3 story, bsmt. elementary school, auditorium, gymnasium $500,000. Nairne W. Fisher, 1025 W. Sheridan Rd., Chicago, archt. Thos W. Higgins, 228 N. La Salle St., Chicago, Zone 1, assoc. archt.

▲ Mich., Detroit—COLLEGE—Bids Asked—Lawrence Institute of Technology, Dr. E. George Lawrence, pres., 15100 Woodward Ave., 1 and 2 story, brick, steel, concrete college bldgs., incl. classrooms, library, laboratories, stock rooms, Ten Mile Rd. and Northwestern Hy. $1,000,000. Earl W. Pellerin, 16855 La Salle St., archt. CD 10/24.

HEAVY CONSTRUCTION

LOW BIDS AND CONTRACTS

▲ Miller-Thompsen Constr. Co., 23170 Schoenherr Rd., East Detroit, Mich., LB, $3,258,275, total, sewage treatment plant and interceptor sewers:

Heuer Brothers, Muncie, Ind., LB, $336,641, interceptor sewer work;

A. Arcari Constr. Co., Allen Park, Mich., LB, $379,688 interceptor sewer work.

Barney Massa Constr. Co., Inc., 4925 Avondale St., Fort Wayne, Ind., LB, $395,331 interceptor sewer work, MUNCIE, IND. Bd. P. Wks., City Hall, Muncie, Ind. Bids Oct. 1. CD 9/21.

Walsh Constr. Co., 140 N. Dearborn St., Chicago, Ill., CA, $531,295, grading and roadwork, tunnels and walks, storm and sanitary piping for new building at Tinley State Hospital, TINLEY PARK, ILL. State Capitol, Springfield, Ill. Bids June 16, awarded Oct. 5. CD 6/12, under Public Buildings.

MICHIGAN—State Hy. Dpt., 222 Townsend St., Lansing, Zone 13.

L. A. Davidson Co., 213 E. St. Joseph St., Lansing, Mich. LB $886,825; est. $950,000. rein.-con., steel bridge on relocation of M-20 over Tittabawassen River, U B1 of 56-12-6 C1-U (U 263 B), Midland Co. Bids Sept. 30. CD 9/10.

BUILDINGS

LOW BIDS AND CONTRACTS

† The Grinnell Co., Inc., 260 W. Exchange St., Providence, R. I., CA $744,300, prefabricated piping for a process bldg.;

Bowers & Wood Welding & Machine Co., West Memphis, Ark., CA $244,464, furnish piping, cylinder and bubbler supports for a process facility for gaseous diffusion PLANT (Subcontractors under Peter Kiewit Sons' Co., P. O. Box 268, Portsmouth, O.) for Atomic Energy Comn., 1901 Constitution Ave., N. W., Wash., D. C., PIKETON and WAKEFIELD, O. CD 8/13/52, under CA.

Crabtree-Maule Corp., N. & W. Ry., Richmond, Ind., CA $500,000, 3 PLANT addns., RICHMOND, IND. Belden Mfg. Co., Richmond, Ind. Bids Aug. 10, awarded Sept. 15. CD 7/28.

Pere Anderson & Co., 10827 S. Western Ave., Chicago, Ill., CA $600,000, 2 story high SCHOOL, CRETE and MONEE, ILL. Crete-Monee School District 201, Crete and Monee, Ill. Bids Sept. 21, awarded Sept. 30. CD 9/16.

J. Emil Anderson & Son Co., 1809 Balmoral Ave., Chicago, 40, Ill., CA, $500,000, 48,000 sq. ft. WAREHOUSE, LINCOLNWOOD, ILL. Schwayder Bros., 1050 Broadway, Denver, Colo. Arthur M. Heid, 1809 Balmoral St., Chicago 40, Ill., engr. Awarded Sept. 30.

▲ La Salle Constr. Co., 343 S. Dearborn St., Chicago 4, Ill. CA, $1,500,000, RESEARCH LABORATORY, LOMBARD, ILL. American Can Co., 100 Park Ave., New York, N. Y. Awarded Sept. 30. CD 8/28/52.

W. N. Bjorkland Co., Douglas, Mich. CA $567,853, brick, steel elementary SCHOOLS, ADRIAN, MICH. City, Bd. Educ., Adrian, Mich. Bids Sept. 29. CD 9/21.

▲ A. W. Kutsche & Co., 2924 W. Grand Blvd., Detroit, Mich. LB $2,674,000. 3 story, brick, steel, concrete COUNTY BLDG., Main, Howard, Ann and Fourth Sts., ANN ARBOR, MICH. Bd. Supervs. Washtenaw Co., Ann Arbor, Mich. Bids Sept. 23. CD 8/21.

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THE HAYWARD CO., 48-50 Church St., N. Y.

Walter Couse & Co., 12740 Lyndon St., Detroit, Mich. CA $720,000. 1 story, steel, masonry storage WAREHOUSE, Hubbell St., DETROIT, MICH. General Sheet Steel Corp., 13000 Lyndon St., Detroit, Mich.

F. J. Skidmore & Son, Inc., 52 S.W. Capital St., Battle Creek, Mich. CA $998,000. general contract brick, steel, concrete county COURT HOUSE, MARSHALL, MICH. Bd. Superws. Calhoun Co., Marshall, Mich. CD 10/1, under LB.

WEST OF MISSISSIPPI

BIDS ASKED—HEAVY CONSTRUCTION

STATE HIGHWAY LETTINGS

BRIDGES

October 20 Iowa October 23 Kansas, Montana

STREETS AND ROADS

October 20 Colorado, Iowa October 20, 22 Kansas
October 21 Nebraska October 23, Montana

Okla., Tulsa—B.A. 10/23—City, City Hall, Riverside Dr. sanitary interceptor sewer. $778,340. Black & Veatch, 4706 Broadway, Kansas City, Mo., engrs. CD 3/5/52.

▲† Ark., Little Rock—AIRPORT—B.A. 11/12—U. S. Eng., 300 Broadway, Lot 1, demolishing; enlarging railroad and appurtenances, etc., 2,000,000 cu.yd. excav.; Lot 2, same with 1,100,000 cu.yd. excav. at Little Rock Air Force Base. E. M. Freeman & Assoc., Wallace Bldg., engrs.

† Tex., Laredo—RUNWAY, etc.—B.A. About 11/24—U. S. Eng., P.O. Box 1229, Galveston, runway, taxiway exten. and airfield lighting, Laredo Air Force Base, Inv. No. ENG-41-243-54-10. $500,000-$1,000,000. CD 11/28.

BIDS ASKED—BUILDINGS

Tex., Waco—HIGH SCHOOL—B.A. 10/23—St. Mary's Catholic Church of the Assumption, 1401 Washington Ave., Parochial Junior-Senior High School and Sisters' Home. $500,000. Bid date changed. Walter Cocke, Jr. & Co., 1507 Franklin St., archts. Frank Drought, 117 W. Pecan St., San Antonio, engr. CD 9/30.

S. D., Pierre—OFFICE—B.A. 11/3—State of South Dakota, Pierre, 3 story, full bsmnt, U-shaped highway office and laboratory bldg. Approx. $800,000. Hugill, Blatherwick & Fritzel, 367 Boyce-Greeley Bldg., Sioux Falls, archts. CD 4/16.

▲ † Minn., Minneapolis — BUILDINGS — B.A. 12/8 — Veterans Admin., Munitions Bldg., Wash., D. C., alterations, imprvs. to Buildings 1, 2, 3, 5, 6 and 7, outside electrical distr. sys. at Veterans Admin. Hospital. $2,000,000. CD 11/12.

▲ Tex., Dallas—WAREHOUSING UNIT—Bids Asked—Associated Wholesale Grocery of Dallas, 4814 Cass St., 200,000 sq. ft. warehouse unit. $1,700,000. CD 10/2.

HEAVY CONSTRUCTION

LOW BIDS AND CONTRACTS

▲ Omaha Incinerator Corp., 540 Omaha Natl. Bank Bldg., Omaha, Neb., CA $1,041,120. incinerator, OMAHA, NEB. City, City Hall, 18 and Farnam Sts., Omaha, Neb. Bids Sept. 15. CD 9/21, under LB.

Upham Gas Co., Mineral Wells, Tex. Purchase and Hire. $611,862, est. $611,853, natural gas transmission line from near Mineral Wells to point in Wise Co., TEXAS. CD 9/23.

† Austin Road Co., 1000 Singleton Blvd., Dallas, Tex. CA $685,955, est. $700,000, constr. 7,000 ft. runway, taxiway and apron. Bryan Air Force Base, ENG-41-443-4, BRYAN, TEX. U. S. Eng., 100 W. Vickery St., Fort Worth, Tex. Bids Sept. 18, awarded Sept. 28. CD 9/23, under LB.

MONTANA State Hy. Comn., Capitol Bldg. Helena,,
F & S Constr. Co., Butte, Mont. CA $539,550. grav., oil 4.6 mi. Pablo-Kalispell Rd., Lake Co., CD 9/23, under LB.

BUILDINGS

LOW BIDS AND CONTRACTS

▲ Builders Constr. Co., Kerr-McGee Bldg., Oklahoma City 2, Okla., LB $2,926,975, est. $1,700,000. Classen HIGH SCHOOL, N. W. 27 and May Sts., OKLAHOMA CITY, OKLA. Bd. Educ., 400 N. Walnut St., Oklahoma City, Okla. Bids Oct. 6. CD 9/22.

† W. W. Walton Co., Box 810, Tyler, Tex., LB $507,008. WAREHOUSES and MAGAZINES at Longhorn Ordnance Works, Inv. No. Eng-34-066-54-20, MARSHALL, TEX. U. S. Eng., Box 61, Tulsa, Okla. Bids Oct. 1. CD 9/23.

FAR WEST

BIDS ASKED—HEAVY CONSTRUCTION

STATE HIGHWAY LETTINGS

BRIDGES

October 28 California

STREETS AND ROADS

October 28, 29 California

HEAVY CONSTRUCTION

LOW BIDS AND CONTRACTS

Structon, Box 335, Pacific Palisades, Calif., CA, $679,989 transit shed at Berth 34, Pier D, outer harbor, LONG BEACH, CALIF. Long Beach Harbor Dpt., 1333 El Embarkadero St., Long Beach, Calif. Bids Sept. 17. CD 9/24, under LB.

Vinell Co., Inc., 1145 Westminister Ave., Alhambra, Calif., CA, $759,743, Firestone-Downey Storm Drain, Proj. 18, South Gate, LOS ANGELES, CALIF. Los Angeles County Flood Control Dist., 2250 Alcazar St., Los Angeles, Calif. Bids Sept. 11. CD 9/23, under LB.

▲ R. A. Watson Co., 12550 Saticoy St., North Hollywood, Calif., CA, $1,252,513, est. $1,500,000, Proj. 146 Central Ave-Glendale Ave. and portion of Proj. 60 Tropico Storm Drain, Glendale, LOS ANGELES, CALIF. Los Angeles County Flood Control Dist., 2250 Alcazar St., Los Angeles, Calif. Bids Sept. 18. CD 9/23.

▲ Fred J. Early Co., Inc., 22124 S. Vermont Ave., Los Angeles, Calif. and Stolte, Inc., 8451 San Leandro St., Oakland, Calif., CA, $2,900,000 sewage treatment plant trunk lines, a disposal system at Air Force Plant 42, PALMDALE, CALIF. Lockheed Aircraft Corp., 2555 Hollywood Way, Burbank, Calif. Bids Sept. 15. CD 9/21, under LB.

BUILDINGS

LOW BIDS AND CONTRACTS

McDonald Bros., 7014 W. Adams Blvd., Los Angeles, Calif., CA, $744,979, general contract JUVENILE UNIT at Camarillo State Hospital, CAMARILLO, CALIF. State Div. Architecture, 1100 S. Grand Ave., Los Angeles, Calif. CD 9/30, under LB.

Harris Constr. Co., Inc., P. O. Box 199, Fresno, Calif., CA, $664,268, general contract, SCIENCE bldg. at Fresno State College, FRESNO, CALIF. State Div. Architecture, P. Wks. Bldg., Sacramento, Calif. Bids Sept. 22. CD 9/29, under LB.

Rothschild Raffen & Weirwick, 274 Brannan St., San Francisco, Calif., LB, $648,852, completing RECEIVING and TREATMENT UNIT, Stockton State Hospital, STOCKTON, CALIF. State Div. Architecture, P. Wks. Bldg., Sacramento, Calif. Bids Sept. 29. CD 9/10.

CANADA

BIDS ASKED—BUILDINGS

Que., Montreal—SCHOOL—B.A. 10/30—Catholic School Comn., 117 W. Ste. Catherine St., Montreal, 2 story, bsmnt., 63x365 ft., concrete, steel, brick, stone SCHOOL, Bellechase St., Parish of Notre Dame du Foyer, $600,000. G. Gagnier, 1449 Crescent St., archt. CD 12/8.

BUILDINGS

LOW BIDS AND CONTRACTS

Hill-Clark-Frances Ltd., Whitewood Ave., New Liskeard, Ont., CA, $640,144, 64 HOUSING units, Job 14/53, DEEP RIVER, ONT. Central Mortgage & Housing Corp., 40 Eglinton Ave. E., Toronto, 12, Ont. Bids Sept. 24. CD 9/8.

▲ Canadian Liquid Air Ltd., 1111 Beaver Hall Hill, Montreal, Que., CA, $1,000,000, PLANT, HAMILTON, ONT. Dominion Foundry & Steel Ltd., 14 Depew St., Hamilton, Ont. E. O. Davis, c/o owner, engr. CD 2/15/49.

W. H. Cooper Constr. Co. Ltd., 21 Hunter St. E., Hamilton, Ont., LB, $650,000, Norwood Park SCHOOL, HAMILTON, ONT. Hamilton Bd. Educ., 367 Hunter St. W., Hamilton, Ont. Bids Sept. 29. CD-9/3.

▲ Foundation Co. of Canada Ltd., 166 Douglas St. W., Sudbury, Ont., CA, $2,000,000, 5 story, bsmnt., T-shaped, 270x62 ft., and 135x85 ft., concrete, brick, tile general HOSPITAL WING, SUDBURY, ONT. Sudbury Memorial Hospital Bd., Sudbury, Ont. CD 8/21/51.

Industrial Leaseholds Ltd., 578 Yonge St., Toronto, Ont., CA, $500,000, 2 story, bsmnt., 70x220 ft., part reim-con., part steel frame, brick PRINTING PLANT, TORONTO, ONT. Hugh C. MacLean Publications Ltd., 347 Adelaide St. W., Toronto, Ont. Weir & Cripps, 752 Yonge St., Toronto, Ont., archts. Awarded Sept. 15. Former contract rescinded. CD 8/12, under CA.

▲ Roy P. Rodgers Enterprises, Ltd., Lawrence Ave. E. and Don Mills Rd., Toronto, Ont. Owner Builds, $2,000,000, APPARTMENT PROJECT, incl. 21 apartment houses, TORONTO, ONT. Town Planning Consultants, Ltd., 24 Bloor St. E., Toronto, Ont., engrs.

Xavier Neron & Sons Ltd., 355 La Fontaine St., Chicoutimi, Que., CA, $750,000, concrete, steel, brick stone HOSPITAL, DOLBEAU, QUE. Reverend Soeurs Hospitalieres de la Misericorde de Jesus, Dolbeau, Que. CD 7/10/52.

Freoschli & Heisler Ltd., Karsgaard Bldg., Moose Jaw, Sask., CA, $505,068, concrete, brick DORMIMTORY bldgs., MOOSEJAW, SASK. Province of Saskatchewan, Regina, Sask.

ALASKA

HEAVY CONSTRUCTION

LOW BIDS AND CONTRACTS

▲† Morrison-Knudsen Co., Inc., 319 Broadway, Boise, Idaho. LB $2,165,532. bulk liquid fuels storage, transfer and hydrant refueling facilities, Inv. 54-9, Ladd Air Force Base, ALASKA. U. S. Eng., Arcade Bldg. Seattle 1, Wash. Bids Oct. 1. CD 9/23.

† ALASKA—Bureau P. Rds., Dpt. Commerce, 419 Federal and Territorial Bldg., Juneau,

Morrison-Knudsen Co., Inc., 319 Broadway, Boise, Idaho. LB $745,288, clearing, grubbing, grading, drainage 6.022 mi. Glacier Hy., Proj. 2-F8. Bids Sept. 30. CD 9/14.

(Proposal Advertisements see pp. 62 to 64)

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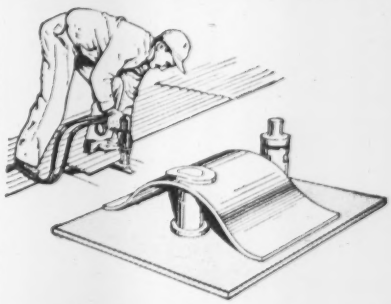

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9 SIKA COMPOUNDS TO END REPAIR PROBLEMS ON CONCRETE AND MASONRY

FOR PRESSURE LEAKS
(SIKA No. 2, SIKA No. 4A) Leaks are easily sealed on the exposed side with quick setting SIKA mortar. It is not necessary to relieve pressure. SIKA No. 2 is used against heavy pressure or bleeders; SIKA No. 4A against seepage or moderate pressure.

FOR JOINTS OR CRACKS
(IGAS JOINT SEALER, SIKA CAULKING) IGAS JOINT SEALER seals even against pressure and continual movement. Will not sag, crack, dry out, become brittle or lose adhesion in work above grade. SIKA CAULKING is used where highest resistance to atmospheric change is desired.

FOR EXTERIOR REPAIRS
(SIKA-KOTE, SIKA TRANSPARENTS) SIKA-KOTE, a protective and decorative coating in 9 colors and white, prevents moisture penetration on concrete and masonry structures. SIKA TRANSPARENTS render brick structures water-repellent and preserve their appearance.

FOR NON-LEAKING SURFACES
(SIKACRETE, SIKA-KOTE) Water-resistant SIKACRETE mortar is used wherever cement-coat work is indicated. Economical, easy to apply, SIKA-KOTE prevents penetration of ground-moisture.

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(SIGUNIT, SIKA No. 4, PLASTIMENT) For quick work against leaks or in tidal areas, SIGUNIT in mortar prevents washouts. SIKA No. 4 (GROUT-SIKA) accelerates set, increases cohesion of mortar and adhesion of grout to rock.

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This 8-page illustrated book discusses the theory and practice of obtaining a good concrete. Beginning with the gel mechanics of cement-water reaction, it describes the factors affecting cement hydration and basic quality of concrete, and how these factors can be controlled to reduce cracking and increase concrete hardness and impermeability.

SIKA CHEMICAL CORPORATION

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UNIT PRICES

Sewage treatment plant, Ohio

Four bidders competed for a $329,252 sewage plant contract awarded by the city of Miamisburg, Ohio, to H. W. Miller Const. Co., the low bidder. Aldred LeFeber & Associates are the engineers.

The bid that Miller submitted was 5% below the second low and 12% below the high.

The plant will service an area having an ultimate population of 7,500 and will have an average flow of 1.0 MGD. This includes 30% for future growth. Its anticipated performance allows for 40-50% BOD removal and 65-75% suspended solids removal. With chemical flocculation, for which there are standby facilites, these percentages will be 10-15% higher.

Also included in the primary treatment process are facilities for preaeration and settling, separate sludge digestion, and sludge drying on open beds. The sludge digestion tank has a capacity of 26,400 cu ft with a 40-ft diameter and a 57-day displacement period. The 7,560 sq ft of sludge drying beds provide approximately 1.0 sq ft per capita.

For dry weather flow, two bladeless impeller sewage pumps (350 and 700 gpm) are provided, and two existing 1,200 gpm pumps stand by for discharge of storm flows directly to the Great Miami River.

Prevailing wage rates in the area include: electricians, $3.04 per hr; sewer bricklayers, $2.75 per hr; cement finishers, $2.47 per hr; sewer pipe layers, $1.99 per hr. and common laborers, $1.83 per hr.

Bidders include:

1C	H. W. Miller Const. Co., Covington, Kentucky	$329,252
2	Dawson-Evans Const. Co., St. Bernard, Ohio	347,624
4	Encrete, Inc	372,450

Bids: 4-17-53 Item	Unit	Quantity	Mat & Labor	Unit Prices 1 C	2
			M	$6,197	$6,381
Outfall sew & headwall	ls	1	L	4,000	5,220
			M	31.00	0.77
60" diameter tunnel	lf	80	L	80.00	0.63
			M	23,500	3,108
12" force main	ls	1	L	20,000	2,542
			M	2,660	25,829
6" force main	ls	1	L	2,000	23,000
			M	15,600	21,000
Outside piping	ls	1	L	15,000	20,876
			M	7,770	9,203
Inside piping & valves	ls	1	L	1,000	7,400
			M	7,600	2,900
Chambers, vaults & MH	ls	1	L	8,000	2,373
			M	11,815	8,882
Add to & alter existing pump station	ls	1	L	13,000	7,000
			M	3,500	3,243
Comminutor	ls	1	L	850	2,600
			M	2,000	2,243
Sew pumps & float cont	ls	1	L	858	1,800
Parshall flume & metering equipment	ls	1	M	900	4,367
			L	218	3,700
Aerator-clarifier tank & equipment, 50' dig	ls	1	M	20,000	20,891
			L	20,000	17,000
			M	11,800	12,814
Administration bldg	ls	1	L	10,000	10,000
			M	3,000	2,856
Chemical feeders	ls	1	L	900	2,200
			M	1,200	1,154

Bids: 4-17-53 Item	Unit	Quantity	Mat & Labor	Unit Prices 1 C	2
Sludge pump	ls	1	L	350	913
			M	19,168	18,753
Sludge digestion tank, tunnel & equipment	ls	1	L	20,000	15,000
			M	8,800	7,107
Sludge beds	ls	1	L	7,000	6,000
			M	2,170	2,289
Plumbing	ls	1	L	2,000	1,800
			M	1,200	1,659
Heating & ventilating	ls	1	L	1,380	1,300
			M	5,100	5,687
Electrical work	ls	1	L	1,000	1,660
			M	500.00	3,403
Painting	ls	1	L	1,700	2,809
			M	6,000	8,803
Grade rdwy & walks	ls	1	L	3,950	7,500
			M		0.09
Seeding	sy	17,000	L	3,400*	0.05
			M		0.25
Sodding	sy	1,300	L	975.00*	0.30
			M	1.50	1.75
Fence	lf	1,700	L	0.85	1.50
			M	100.00	100.00
14' double gates	ea	3	L	22.00	30.00
Lab & office equip	ls	1	*	3,300	3,300
			M	2.00	
Extra excavation	cy	50	L	6.00	5.50
			M	30.00	10.00
Extra conc, class 1	cy	20	L	40.00	60.00
			M	30.00	10.00
Extra conc, class 2	cy	10	L	40.00	60.00
			M	25.00	10.00
Extra conc, class 3	cy	10	L	20.00	60.00
			M	0.08	0.12
Extra reinf stl	lb	4,000	L	0.08	0.08
			M	4.00	3.50
Slag or stone refill	cy	20	L	2.00	2.50
			M	100.00	100.00
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* Total

Sanitary sewers, California

Close competition among ten contractors characterized the bidding on a $74,848 sanitary sewer contract awarded by Los Angeles County to B. Bosnyak & J. N. Satalo, Los Angeles.

Only 11% separated the first nine bids resulting in an average of a little over 1% between bids. An estimate by William J. Fox, Los Angeles county engineer, was 10% above the contract award low bid and higher than eight of the ten bids.

The sewer and trench resurfacing job includes 2.598 miles of 8-in main line sewer; 6-in house lateral sewer; and 53 manholes.

The job will be completed in four months.

In this area steam fitters are receiving $3.125 per hr; carpenters, $2.70 per hr; and common laborers, $2.05 per hr.

Bidders include:

1C	B. Bosnyak & J. N. Satalo, Los Angeles, Calif.	$74,848
2	Economy Sewer Const. & Western Pipeline Const. Co., Los Angeles, California	76,005
10	Izzi Construction, Temple City, California	95,945
EE	W. J. Fox, Los Angeles County Engineer	82,625

Bids: 8-14-53 Item	Unit	Quantity	Unit Prices 1 C	2
VC pipe main line sewer, extra strength, 8"	lf	740	$4.00	$4.60
VC pipe main line sewer, standard strength, 8"	lf	12,980	3.00	3.60
VC pipe house lateral sewer, extra strength, 6"	lf	680	3.00	3.50
VC pipe house lateral sewer, standard strength, 6"	lf	7,330	2.75	2.50
Brick sewer structures	ea	50	200.00	250.00
Trap manholes	ea	3	250.00	300.00

BDSA: Industry's attitude will determine its future

Construction people have a multiple interest in the new Business and Defense Services Administration that got off to a halting start the first of the month.

Top-level changes in the Commerce Department give promise that the BDSA foundling—left on the Commerce doorstep by Craig R. Sheaffer, when he resigned recently as Assistant Secretary—will be brought up to give the useful service originally intended.

That service has two purposes: (1) to furnish help to domestic business, including construction specifically, by functioning as an effective two-way channel between the department and U. S. industry, and (2) to maintain a trained industry-government team that could quickly and smoothly put into effect a new CMP—Controlled Materials Plan—in event of a national emergency.

Commerce Secretary Sinclair Weeks last week filled Sheaffer's spot with a new appointee. Lothair Teetor, board chairman of the Perfect Circle Co., Indiana piston ring manufacturer, is the new Assistant Secretary who inherits BDSA.

• **New chief**—Teetor and Weeks moved fast in announcing appointment of an administrator for BDSA. To fill that job, the Secretary named Charles F. Honeywell, West Coast businessman who has been serving since early this year as senior special assistant to Weeks.

To operate successfully, the new BDSA needs the enthusiastic support and cooperation of U. S. industry—and of the trade associations that represent individual industries. Sheaffer made the apparent mistake of launching BDSA without adequately consulting the associations—and without getting their prior support.

Association people greeted the announcement of the paper organization with apathy if not with downright displeasure. Evidence of that shows up in the large number of unfilled places among the directors and deputy directors who head the 23 industry divisions. These men are supposed to come mainly from executive posts in private industry.

• **Big holes**—Three of the divisions are directly tied to construction; glaring holes show up in the top spots of all three.

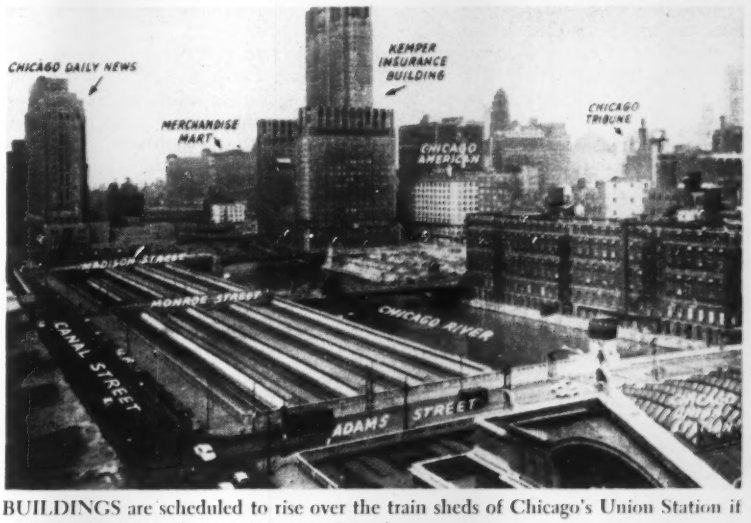
Of broadest interest to construction people is the division that now bears the name Building Materials and Construction. Up to last weekend, this division had no director and little prospect of landing one quickly. Industry leaders hoped they could persuade Walter H. Acheson to take the assignment.

Acheson made an outstanding record as chief of the building materials branch in the Office of Price Stabilization while that emergency office was at its most active and most critical stage. In private life he runs a building supplies and ready-mixed concrete business in Urbana, Ill., as general manager for the Somers-Barr Co., Inc.

For the present, BDSA's Building and Construction Division is headed by an acting deputy director, Charles P. Redick. Redick has ably served as building materials deputy on CMPs for two emergency controls agencies—the War Production Board of World War II and the National Production Authority of the Korean crisis.

• **Permanent deputy**—On the division that handles construction machinery there also is a vacancy at the top. But this division has a permanent deputy director in John Skillman. In World War II, Skillman did a good WPB job on CMP policy. He did yeoman service for NPA, traveling the country to explain CMP to businessmen.

A third division servicing construction has both of its two top jobs filled, though the deputy is now on an "acting" basis. Heading this division—cumbersomely labeled Water & Sewerage Division and Utilities—is Thomas T. Quigley, advertising manager for Wallace & Tiernan Co. of Belleville, N. J. As his acting deputy, Quigley has Walter L. Picton, a water specialist who has served with the old National Housing Agency and National Security Resources Board.



BUILDINGS are scheduled to rise over the train sheds of Chicago's Union Station if projected deal to sell air rights goes through.

$75 million in buildings for Chicago

The New York building firm of Simon Brothers has reached a preliminary understanding with the Chicago Union Station Co. and the Pennsylvania Railroad to lease and develop air rights over three city blocks in central Chicago. The Simon group plans $75 million worth of buildings in this 332,000-sq ft tract, located on the Chicago River west bank between Madison and Van Buren Streets.

In the northernmost block, between Madison and Monroe Streets, the Simon group plans a $20-million, 15-story exhibition building for manufacturers of heavy machinery. In the next block, between Monroe and Adams Streets, there would be an office building. The type of structure to be put up in the third block (not shown in picture) has not been decided.

Tax-aided plants

Their construction work schedules are to reach a peak this year

Though the federal government is becoming much less generous about issuing certificates for fast amortization of new plants (ENR Sept. 10, p. 158), actual construction work on the $28-billion worth of new or expanded facilities certified under the plan is going into high gear.

According to the progress report just made by the Office of Defense Mobilization, $12.5-billion worth of plant and equipment will be put in place this year alone. By the end of the year, the cumulative total of T/A-aided facilities is scheduled to be $18.2 billion.

However, the ODM report indicates that construction will have to be stepped up sharply during the last quarter of this year if the 1953 schedule is to be carried through. During the first half of 1953, plant construction and installation of equipment was badly behind schedule.

Value of work put in place during the first half was only about $2.9 billion, around $4 billion below original schedules. This was largely the result of the lag created by the 1952 steel strike.

• **Over the hill**—But after the start of next year, construction of new defense facilities will begin to peter out. ODM's latest schedules list $5.5-billion worth of plant and equipment to be put in place in 1954, $1.2-billion in 1955, $597-million in 1956, $198-million in 1957, and $39-million after 1957. These figures do not take into account the $2.3-billion worth of additional defense expansion authorized since March 31.

Only about 30% of this money has been going into actual construction, ODM's progress report shows. About two-thirds of the money is spent for machinery and equipment, and the rest for land and overhead expenses.

The 1950-1953 tax amortization program greatly overshadows the similar World War II program. During 1941-1945 when the government built a lot of its own plants and then leased them, only $6-billion worth of new plant and equipment was built with the assistance of fast tax write-offs. During the post-Korea program, so-called "defense-supporting and essential civilian" industries have been treated on a par with munitions makers.

Bechtel and Kidde will study power prospects of the atom

Bechtel Corp., of San Francisco, and Walter Kidde Nuclear Laboratories, Inc., of Garden City, N. Y., have just started atomic study programs to see if it is feasible to produce electric power from atomic reactors. Kidde Laboratories (ENR May 16, p. 156) is a subsidiary of Walter Kidde Constructors, Inc.

Both firms are working in conjunction with public utilities. Bechtel is associated with American Gas & Electric Service Corp., of New York; Commonwealth Edison Co., Chicago; Pacific Gas & Electric Co., San Francisco; and Union Electric Co., St. Louis. Bechtel previously was teamed with Pacific Gas & Electric in an earlier study of the prospects of commercial power from the atom. The other companies have also been studying in this field.

According to Philip Sporn, president of AGE Service Corp., the new group's first objective is to select a reactor design that can be built in the near future, intended primarily for the production of electric power. Having picked their design, the group will make a preliminary appraisal of the economics involved.

Kidde Laboratories will work with Duquesne Light Co., Pittsburgh, in surveying the feasibility of design, construction, and private operation of power-producing reactors.

North Carolina votes $72 million for construction

North Carolina's big building program (ENR Oct. 8, p. 181) continues to roll right along. On Oct. 3, voters overwhelmingly approved $72 million in bonds in a referendum which, however, had only a light turn-out.

Of the $72 million, $50 million is for public schools and $22 million for mental hospitals. The school construction is designed to meet an urgent need for new facilities and make them more nearly equal for white and Negro children.

According to the law authorizing the school bond issue, each of the state's 100 counties will receive $100,000, regardless of size. Another $15 million will be allocated to counties on the basis of average daily attendance during the 1951-1952 school year. The other $25 million will be distributed by the State Board of Education on an "according to need" formula.

Four major projects are included in the mental hospital program: a $2-million hospital and admission buildings for the Morganton State Hospital; a $3-million renovation program for Butner State Hospital, and two $4.5-million schools for the feeble minded.

AEC contractors will now pay state sales tax in Tennessee

As of Oct. 1, contractors working on Atomic Energy Commission projects in the state of Tennessee became liable for state sales taxes.

State Tax Commissioner Z. D. Atkins announced that dealers making sales to AEC contractors must charge and collect the 2% tax just as on any other sales. During the last session of Congress, the Atomic Energy Act was amended to authorize state governments to tax AEC contractors. The amendment followed a court decision in January 1952, that Tennessee should refund $3 million in taxes collected from such contractors from mid-1947 through 1951.

According to Commissioner Atkins, some contractors have been given special permission to pay their tax directly to the state. But to dealers who sell them supplies they must show proof that they have this permission.

New skyscraper planned for Wall Street area

New York City's financial district will get its first new office skyscraper in more than 20 years when a 30-story, air-conditioned building is put up at No. 2 Broadway, present site of the 69-year-old New York Produce Exchange. Estimated cost of the projected building is $25 million.

The building will be erected by investors Jack D. Weiler, of New York City, and Benjamin H. Swig of San Francisco, who have leased the land for 50 years with two renewal options of 25 years each.

As part of the deal, the Produce Exchange will occupy about 20,000 sq. ft. of the projected 1,000,000 sq. ft. to be provided in the new building. Members of the Produce Exchange are expected to rent about another 200,000 sq. ft. and negotiations are reported to be pending with two other exchanges, as well as with a number of other downtown firms, which would account for about 500,000 sq. ft.

Both Weiler and Swig have large realty interests throughout the U. S., including the recently finished J. P. Stevens Building on Broadway, New York City, and the Fairmont Hotel and Merchandise Mart in San Francisco.

OFFICIAL PROPOSALS

RATE: The rate for official proposal advertising is $1.50 per line (or fraction) per insertion.

COPY RECEIVED: Up to 10:00 A.M. Friday for issue out following Thursday subject to space open for last minute ads.

SEND COPY: To Official Proposal Division, Engineering News-Record, 330 W. 42nd St., New York 18, N. Y.

Bids: October 29, 1953

Horace Harding Expressway

STATE DEPARTMENT OF PUBLIC WORKS, ALBANY, N. Y.—Pursuant to the provisions of Highway Law, sealed proposals will be received until 10:30 A.M., Eastern Standard Time, on October 29, 1953 by Henry A. Cohen, Director, Bureau of Contracts and Accounts, 14th Floor, The Governor Alfred E. Smith State Office Building, Albany, N. Y. for

SOIL EXPLORATIONS AND FOUNDATION INVESTIGATIONS AT VARIOUS SITES ON THE HORACE HARDING EXPRESSWAY, SECTION 1, QUEENS BOULEVARD TO PARSONS BOULEVARD, CITY OF NEW YORK, QUEENS COUNTY, WHICH CONSTITUTES CONTRACT NO. SPEC. SM-59

Maps, plans and specifications may be examined and obtained at the following offices:

(a) Bureau of Contracts and Accounts, 14th Floor, The Governor Alfred E. Smith State Office Building, Albany 1, New York

(b) M. E. Goul, District Engineer, Montauk Highway and Little East Neck Road, Babylon, L. I., New York

(c) Charles Schaefer, Department of Public Works, 270 Broadway, New York City

The deposit for a set of plans, specifications and proposal forms is $5.00. A refund in full will be made to bidders for return of one set in good condition within 30 days of award or rejection of bids; refund for all other sets in good condition, similar period, will be 50% of deposit.

The Engineer's estimate of cost for this work is $48,225.00.

Proposal for this contract must be submitted in a separate sealed envelope with the name of the contract plainly endorsed on the outside of the envelope. Proposal must be accompanied by draft or certified check, payable to the order of the "State of New York, Commissioner of Taxation and Finance" for the sum of $2,412.00. The retention and disposal of the bidding check, the execution of the contract and bonds shall conform to the provisions of the Highway Law, as set forth in "Instruction to Bidders".

The right is reserved to reject any or all bids.

H. D. Tallamy
SUPERINTENDENT OF PUBLIC WORKS

Sacramento cracks down on "suede shoe boys"

In Sacramento, Calif., the district Federal Housing Administration office and the Better Business Bureau are after the "suede shoe boys," the high-pressure salesmen who occasionally victimize home owners.

Says local FHA Director Roy H. Pinkerton: "We call them suede shoe boys, because mostly they wear suede shoes and flashy clothes, and drive expensive cars."

The most popular of the current schemes is the "model home" approach. A salesman offers a home owner some form of modernization, claiming that his home will be used as a "model house." The owner is promised a bonus for orders the salesman will receive in the neighborhood. Of course, the promised bonus never materializes. The salesman disappears, while the home owner foots the bill for modernization without the help of the extra money.

Consent decree ends Cleveland antitrust case

Fourteen of the biggest of 42 dealers in building supplies in the Cleveland metropolitan area last week signed a consent decree, agreeing not to fix prices or use any uniform pricing system.

This ends a 4½-year suit against the late Harry A. Dubrov, who was charged with publishing a price list which the government alleges was used by the 42 dealers in setting retail prices. In signing the decree, the dealers did not admit the validity of the government's case.

The price list covered 90 "hard" building items, including cement, sand, brick, stone, gravel, gypsum, plaster, lath, insulation, and slag. The government estimated that the 42 dealers which it claimed were involved handled about half the sales volume of these items in the Cleveland area.

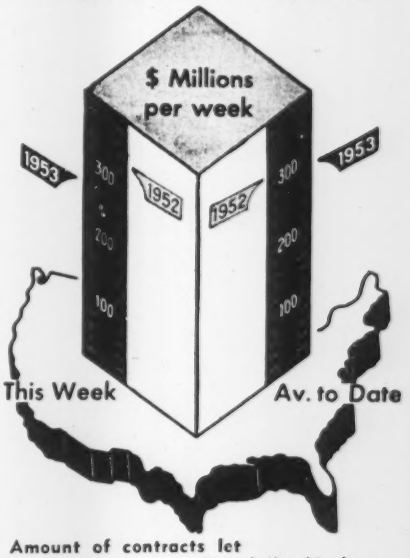
Business briefs . . .

• **New construction in place** during the first nine months of 1953 is up 9% in dollar value over the 1592 period, according to the Departments of Commerce and Labor. That's a total of $25.9 billion.

• **Plywood price cuts**—Another round of reductions, this one initiated by U. S. Plywood Corp. of Washington, has brought the price of bellwether plywood grade down to $76. Last August, it had been selling at $90.

Activity This Week

As reported to ENR (in millions of dollars)



Amount of contracts let

	This Week*	Cumulative 42 wks 1953	1952	% chge
Federal	$39.4	$1,233.9	$4,108.5	−70
State and municipal	127.6	4,064.7	3,371.9	+21
Total pub.	167.0	5,298.6	7,480.4	−30
Total priv.	101.9	6,919.3	5,684.8	+22
U. S. total	**$268.9**	**$12,217.9**	**$13,165.2**	**−7**
Contracts by type of work				
Waterworks	$2.5	$193.3	$178.9	+8
Sewerage	11.4	357.4	237.3	+51
Bridges	9.9	541.8	322.8	+68
Highways	51.0	1,479.7	1,231.0	+20
Earthwork, waterways	3.9	307.3	408.6	−25
Buildings:				
Public, excl. hsg.	42.9	1,391.4	3,903.8	−64
Housg., pub.	7.0	334.6	534.1	−37
Housg., priv.	33.8	2,930.3	2,455.2	+19
Commercial	10.1	945.2	539.6	+75
Industrial	20.7	2,339.5	2,254.0	−1
Unclassified	75.7	1,497.4	1,099.9	+36
Total	**$268.9**	**$12,217.9**	**$13,165.2**	**−7**

NOTE: Minimum size projects included are: Waterworks and waterway projects, $34,000; other public works, $60,000; industrial buildings, $82,000; other buildings, $200,000.

* Six-day week.

New capital for construction

	Week of Oct 8 1953	41 Wks 1953	Cumulative % chge '52-53
Corporate securities	$42.0	$3,609.9	+22
State and municipal:			
Excluding housing	33.5	3,297.0	+37
Housing	...	232.7	−3
Federal loans	0.9	93.0	−70
Federal aid	...	770.9	+40
Total non-federal	**$76.4**	**$8,003.5**	**+24**
Federal approp:			
In U. S.	...	1,566.7	−79
Outside U. S.	...	28.9	−85
Total new capital	**$76.4**	**$9,599.2**	**−32**

ENR indexes		1953	Base Years = 100 1913	1926	1949
Construction cost	Oct	610.76	293.59	128.04	
	Sept	610.17	293.31	129.91	
Building cost	Oct	436.31	235.86	124.03	
	Sept	436.10	235.74	123.97	
Volume	Sept	487	198	141	
	Aug	487	198	141	

OFFICIAL PROPOSALS

Bids: October 29, 1953

New York State Road Work

NOTICE TO CONTRACTORS: STATE DEPARTMENT OF PUBLIC WORKS, ALBANY, N. Y.,—Pursuant to the provisions of the Highway Law, and special provisions for projects financed with Federal Aid funds, sealed proposals will be received until ten-thirty o'clock A.M., eastern standard time, on the 29th day of October 1953, by Henry A. Cohen, Director, Bureau of Contracts and Accounts, 11th Floor, The Governor Alfred E. Smith State Office Building, Albany, N. Y., for the following projects:

County	Contract No.	Name	Miles	Type	Deposit	Estimated Cost of Work
		DISTRICT No. 8				
		J. S. Bixby, District Engineer, Pleasant Valley Road, Poughkeepsie, N. Y.				
Rockland	FASS 53-19	Minisceongo Creek Bridge and Approaches on the Stony Point-Grassy Point Road. Project S-42(1)	0.13	Asp. Conc. Ty. IA, Opt. 100' Composite I-Beam	$11,000 Plans $10	$219,000
		DISTRICT No. 9				
		F. W. Donovan, District Engineer, 71 Frederick St., Binghamton, N. Y.				
Delaware	FASS 53-18	Roscoe-Downsville, Pt. 2 (Co. Rd. 1. Project S-3961)	7.33	Bit. Mac. Ty. 1 7.33 Mi. 1 Br. Comp. I.B. 483' 4 Brs. Steel I-Beams 38', 40', 24', & 32'	$61,000 Plans $50	1,111,000

Maps, plans, specifications and proposal forms may be seen and obtained at the office of the State Department of Public Works, Bureau of Contracts and Accounts, Albany, N. Y., and at the office of the District Engineers noted above, and may also be seen at the office of the State Department of Public Works, 270 Broadway, New York City.

The deposit for Plans and Proposal Forms for each contract is indicated above. A refund will be made in full to bidders for return of one set, in good condition, within 30 days of award, or rejection of bids; refund for all other sets in good condition, similar period, will be 50% of deposit.

Special attention of bidders is called to "General Information for Bidders" in the proposal, specification, and contract agreement, and to the special provisions applying to projects financed with federal funds. Award of a contract is subject to the "Controlled Materials Plan" of the National Production Authority as well as to regulations issued thereunder.

Proposal for each contract must be submitted in a separate sealed envelope with the name and number of the contract plainly endorsed on the outside of the envelope. Each proposal must be accompanied by draft or certified check payable to the order of the "State of New York, Commissioner of Taxation and Finance" for the sum as specified in the advertisement and the proposal. The retention and disposal of the bidding check, the execution of the contract and bonds shall conform to the provisions of the Highway Law, as set forth in "Instructions to Bidders."

When optional types are permitted on contracts with federal funds, bidders must state in the space provided in the proposal the exact designation of the optional type upon which the proposal is predicated.

The right is reserved to reject any or all bids.

R. D. TALLAMY
SUPT. OF PUBLIC WORKS

U. S. Government

DEPARTMENT OF THE INTERIOR, Bureau of Reclamation. Sealed bids (Specifications No. DC-4061) will be received at Chester, Montana, until November 19, 1953, for furnishing labor and materials for relocation of Fort Peck-Great Falls, 161-kilovolt transmission line in the vicinities of Havre and Loma, Montana, Fort Peck Project, Montana. Location near Havre and Loma, Montana. Principal items are: Constructing wood pole transmission line structures, 100 structures; placing guy anchors, 119 anchors; assembling and attaching insulator assemblies, 350 assemblies; stringing three 300,000 circular mil copper conductor, 10.6 miles; dismantling and salvaging of materials of the relocated sections of the existing transmission line, lump sum; and other work. Completion time 75 days. For particulars, address Bureau Building 53, Denver Federal Center, Denver, of Reclamation, Chester, Montana; or Colorado.

W. A. DEXHEIMER, Commissioner

U. S. Government

DEPARTMENT OF THE INTERIOR, Bureau of Reclamation. Sealed bids (Specifications No. DC-4059) will be received at Jamestown, North Dakota until November 17, 1953, for furnishing labor and materials for earthwork, structures, and surfacing, Buchanan and Edmunds roads, Jamestown Unit, North Dakota, Missouri-Souris Division, Missouri River Basin Project. Location: 10 and 23 miles north of Jamestown, Stutsman County, North Dakota. Principal items are: 94,600 cu. yds. excavation; furnishing and erecting 96.0 Mbm treated and untreated timber; furnishing and driving 2,880 lin. ft. treated timber piles; furnishing and driving 200 lin. ft. steel piles; 900 cu. yds. gravel or crushed rock surfacing; and other work. Completion time 300 days. For particulars, address Bureau of Reclamation, Jamestown, North Dakota; or Building 53, Denver Federal Center, Denver, Colorado.

W. A. DEXHEIMER, Commissioner

U. S. Government

DEPARTMENT OF THE INTERIOR, Bureau of Reclamation. Sealed bids (Specifications No. DC-4060) will be received at Albuquerque, New Mexico, until October 29, 1953, for furnishing labor and materials for earthwork, clearing and structures for rehabilitation of drains, Unit AW-1, Middle Rio Grande Project, New Mexico. Location near Albuquerque, New Mexico. Principal items are: Clearing and cleaning approximately 42 miles of open drains; furnishing and laying 5460 lin. ft. of 18-inch to 72-inch corrugated metal pipe; furnishing and laying 200 lin. ft. of corrugated metal pipe arch; and other work. Completion time 180 days. For particulars, address Bureau of Reclamation; Albuquerque, New Mexico; or Building 53, Denver Federal Center, Denver, Colorado.

W. A. DEXHEIMER, Commissioner

Official Proposals Columns

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are MUST reading, each week, for contractors, engineering-construction companies, equipment and materials manufacturers, all over the United States.

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Official Proposal Division
ENGINEERING NEWS-RECORD
New York 36, N. Y.

OFFICIAL PROPOSALS

Bids: October 20, 1953

Construction of Electrical System

NOTICE TO BIDDERS

Sealed proposals will be received by the Pennsylvania Turnpike Commission through the Chairman, 11 North Fourth Street, Harrisburg, Pennsylvania until 10:00 A.M., (Eastern Standard Time), the 20th day of October 1953, and immediately thereafter will be taken to the Public Utility Commission's Hearing Room No. 1, North Office Building, State Capitol, Harrisburg, Pennsylvania and publicly opened and read aloud, for each of the following two groups of contracts:

For the construction of Electrical System for the Utility Building and Toll Plaza at each of the interchanges listed below in each group:

GROUP I

Contract No.	Interchange	Connecting Route	County
420-CR	Valley Forge	US 202	Montgomery
421-CR	US 422	US 422	Montgomery
422-CR	US 309	US 309	Montgomery

GROUP II

Contract No.	Interchange	Connecting Route	County
423-CR	US 611	US 611	Montgomery
424-CR	US 1	US 1 (New)	Bucks
425-CR	US 13	US 13	Bucks

The work to be performed under each of these two groups of contracts consists of the construction of Electrical System for the Utility Building and Toll Plaza and all work incident thereto at each of the three interchanges listed under each group. The Utility Buildings and Toll Plaza are to be constructed by others. Plumbing and Heating will be installed by others.

Copies of plans, specifications and Contract Documents are on file and open to public inspection on and after October 6, 1953, at the offices of the Pennsylvania Turnpike Commission in Harrisburg, Pennsylvania; at the Commission's field office in Conshohocken, Pennsylvania, 10th Avenue and Hallowell Street and at the Commission's field office in Bristol, Pennsylvania, 700 Canal Street.

Plans and Contract Documents which cover both groups of contracts may be obtained from the Commission upon deposit of Ten ($10.00) Dollars for each set, such deposits to be refunded in full to any actual bidder upon return of such documents in good condition within five (5) days after the date of the opening of the bids. Refund will be made for all plans and specifications returned, if the project is withdrawn from letting by the Pennsylvania Turnpike Commission.

Remittances are payable to the Pennsylvania Turnpike Commission and must accompany requests for drawings and specifications.

Copies of Specifications for grading, drainage, paving and structures may be purchased from the Pennsylvania Turnpike Commission for the sum of Five ($5.00) Dollars per copy.

The character and amount of bid security to be furnished by bidder is stated in the Instructions to Bidders.

No bids may be withdrawn for thirty (30) days after the scheduled closing time for receipt of bids.

The Pennsylvania Turnpike Commission reserves the right to waive any informalities in or to reject any or all bids.

PENNSYLVANIA TURNPIKE COMMISSION
James F. Torrance
Secretary and Treasurer
Harrisburg, Pennsylvania
1 October 1953

Bids: October 29, 1953

Lake Onondaga West Shore Development

STATE DEPARTMENT OF PUBLIC WORKS, ALBANY, N. Y.—Pursuant to the provisions of Highway Law, sealed proposals will be received until 10:30 A.M., Eastern Standard Time, on October 29, 1953 by Henry A. Cohen, Director, Bureau of Contracts and Accounts, 14th Floor, The Governor Alfred E. Smith State Office Building, Albany, N. Y., for

SOIL EXPLORATIONS AND FOUNDATION INVESTIGATIONS AT VARIOUS SITES ON THE LAKE ONONDAGA WEST SHORE DEVELOPMENT, HIAWATHA BOULEVARD TO ROUTE 48 CITY OF SYRACUSE AND TOWNSHIP OF GEDDES, ONONDAGA COUNTY WHICH CONSTITUTES CONTRACT NO. SPEC. SM-60

Maps, plans and specifications may be examined and obtained at the following offices:

(a) Bureau of Contracts and Accounts, 14th Floor, the Governor Alfred E. Smith State Office Building, Albany 1, New York.
(b) Mr. William Robinson, District Engineer, 301 East Water Street, Syracuse, New York.
(c) Mr. Charles Schaefer, Department of Public Works, 270 Broadway, New York City, New York.

The deposit for a set of plans, specifications and proposal forms is $5.00. A refund in full will be made to bidders for return of one set in good condition within 30 days of award or rejection of bids; refund for all other sets in good condition, similar period, will be 50% of deposit.

The Engineer's estimate of cost for this work is $54,375.00.

Proposal for this contract must be submitted in a separate sealed envelope with the name of the contract plainly endorsed on the outside of the envelope. Proposal must be accompanied by draft or certified check, payable to the order of the "State of New York, Commissioner of Taxation and Finance" for the sum of $2,719.00. The retention and disposal of the bidding check, the execution of the contract and bonds shall conform to the provisions of the Highway Law, as set forth in "Instruction to Bidders".

The right is reserved to reject any or all bids.

R. D. Tallamy
SUPERINTENDENT OF PUBLIC WORKS

Bids: October 29, 1953

Repairs to Boiler in Powerhouse

THE PORT OF NEW YORK AUTHORITY
PORT NEWARK NAVAL INDUSTRIAL RESERVE SHIPYARD
CONTRACT O & M 209
PROPOSAL NO. 251

Sealed proposals for furnishing all labor, materials and equipment to make repairs to the boiler in powerhouse, Building No. 9, in the Port Newark Naval Industrial Reserve Shipyard, Port Newark, N. J., will be received at the office of the Director of Purchase of The Port of New York Authority, Room 900, 111 8th Ave., New York 11, until 11:00 A. M. (E.S.T.) on Thursday, October 29, 1953, at which time and place said proposals will be publicly opened and read.

Contract documents may be obtained upon request at the office of the Director of Purchase.

THE PORT OF NEW YORK AUTHORITY
Howard S. Cullman, Chairman.

U. S. Government

COMMONWEALTH OF MASSACHUSETTS, Department of Public Works, NOTICE TO CONTRACTORS: Sealed proposals for State Highway and Bridge Construction in AGAWAM and SPRINGFIELD will be received at Room 427, 100 Nashua Street, Boston, Mass., until 2:00 P. M. of Tuesday, November 3, 1953, and at that place and time publicly opened and read. Proposal guaranty: $65,000. Complete information at said office; plans on display at District offices. Charge for plans and proposal forms: $20.00, amount returnable only to bidders who return plans within three days after opening of bids. Minimum wage and dump truck rates have been established. Right reserved to waive any informality in or reject any or all proposals. An award will not be made to a Contractor who is not equipped to undertake and complete the work. By: JOHN A. VOLPE, Commissioner of Public Works. October 3, 1953.

COMMONWEALTH OF MASSACHUSETTS, Department of Public Works, NOTICE TO CONTRACTORS: Sealed proposals for State Highway and Bridge Construction in the towns of NEEDHAM and WELLESLEY, U-229(5), will be received at Room 427, 100 Nashua Street, Boston, Mass., until 2:00 P. M. of Tuesday, November 3, 1953, and at that place and time publicly opened and read. Proposal guaranty: $170,000. Complete information at said office; plans on display at District offices. Charge for plans and proposal forms: $40.00, amount returnable only to bidders who return plans within three days after opening of bids. Minimum wage and dump truck rates have been established. Right reserved to waive any informality in or reject any or all proposals. An award will not be made to a Contractor who is not equipped to undertake and complete the work. By: JOHN A. VOLPE, Commissioner of Public Works. October 3, 1953.

The minute

you seal the envelope

you seal the verdict...

NO ONE but a bidder can decide, practically, whether he, or someone else, will be the successful bidder on any contract . . . because it is you — the bidder — who decide what you will charge to do the work. No one can decide that but you. So, you actually "write your own ticket."

NATURALLY, you must deliver certain specified materials and perform definite functions, within a certain time—that much of the job is something over which you have no control. But . . . it is when you begin to plan ways and means of DOING the job that you start to win or lose it. If you can do it more quickly, with less loss of motion, and, possibly, with fewer man-hours to charge against the job—in other words, at a lower cost to you — you will have the "edge" you need to make you the successful bidder.

LOW cost operation is usually the result of a thorough knowledge of the most efficient methods—and the use of modern equipment. You will be well repaid through your reading of ENGINEERING NEWS-RECORD—both editorial and advertising.

OFFICIAL PROPOSALS

Bids: October 20, 1953

Clearing and Grubbing Pepacton Reservoir

CONTRACT 436

SEALED BIDS will be received by the Board of Water Supply, at its offices, thirteenth floor, 120 Wall Street, New York City, until 11:00 A.M., Eastern Standard Time, on Tuesday, October 20, 1953, for Contract 436, for clearing and grubbing the middle portion of the Pepacton reservoir, in preparation for the storage of water. The work will comprise the clearing of approximately 1,750 acres, the grubbing of about 550 acres, and required excavation and removal of excrementitious material, all as set forth in the specifications. This portion of the Pepacton reservoir is located in the Towns of Andes and Middletown, Delaware county, New York.

No bid will be received and deposited unless accompanied by a certified check upon a National or State bank, drawn and made payable to the order of the Comptroller of The City of New York, in the amount of forty thousand dollars ($40,000.00) for the proper execution of the contract.

At the above place and time the bids will be publicly opened and read. Pamphlets containing information for bidders, forms of bid and contract, specifications, contract drawings, requirements as to surety, etc., can be obtained in Room 1316 at the above address, upon application in person or by mail, by depositing the sum of five dollars ($5.00) in cash or its equivalent for each pamphlet. Within 30 days following the award of contract or rejection of bids, the full amount of such deposit will be refunded for each pamphlet submitted as a bid and a refund of four dollars ($4.00) will be made for each other pamphlet returned in acceptable condition. For further particulars, apply at the office of the Chief Engineer at the above address.

IRVING V. A. HUIE, President, RUFUS E. McGAHEN, EDWARD C. MAGUIRE, Commissioners, Board of Water Supply; BETTY COHEN, Acting Secretary.

Bids: October 27, 1953

Contract Nos. 39, 39A, 39B, 39C and 39D

Sealed proposals will be received by the West Virginia Turnpike Commission for:

The work to be done under these Contracts consists of the furnishing, erection and painting of corrugated steel guard rail, either or both steel and wood posts; timber shoulder curbs and other incidental work. This work is located between Princeton Mile 0 and Charleston Mile 88, Mercer, Raleigh, Fayette and Kanawha Counties, West Virginia, and is in connection with the construction of the West Virginia Turnpike in the State of West Virginia.

The principal items of work include:

Contract 39	Approximate quantity Steel Posts	Wood Posts
Contract 39	Alternate 1	Alternate 2
Corrugated Steel Guard Rail (10 Ga.)	350,000 L.F.	350,000 L.F.
6 W.F. 8.5 x 6'-0" Steel Posts with brackets	30,000 each	
6" x 8" x 6'-0" Treated Wood Posts with brackets		30,000 each

Quantities tabulated above are divided approximately as follows:

39A-25%, 39B-30%, 39C-25%, 39D-20%

The subdivisions of Contract 39 are as follows:

39A Princeton (Mile 0) to Ghent (Mile 29)

39B Ghent (Mile 29) to Maynor (Mile 42)

39C Maynor (Mile 42) to Standard Tunnel (Mile 68)

39D Standard Tunnel (Mile 69) to Charleston (Mile 88)

Proposals will be received at the office of the West Virginia Turnpike Commission, 1310 Wilson Street, Charleston 5, West Virginia until 1:00 P.M. Eastern Standard Time, and thereafter at the House of Delegates Chamber, State Capitol, Charleston, West Virginia until 2:00 P.M. Eastern Standard Time, on October 27, 1953, at which time and place said proposals will be publicly opened and read.

WEST VIRGINIA TURNPIKE COMMISSION
D. H. Morton, Chairman

OFFICIAL PROPOSALS

Bids: November 12, 1953

Cables and Suspenders For Suspension Bridge, Contract No. 5

DELAWARE RIVER PORT AUTHORITY
Administration Building
Camden, New Jersey

Sealed bids will be received for the construction of Cables and Suspenders for a Suspension Bridge over the Delaware River connecting Packer Avenue, Philadelphia, Pennsylvania and Gloucester City, New Jersey, known as Contract No. 5, at the office of the Executive Director of the Delaware River Port Authority, Administration Building, Bridge Plaza, Camden, New Jersey until 1:30 P. M. Eastern Standard Time, November 12, 1953 at which place and time they will be publicly opened and read by the Authority.

A more complete description of the work and full information for bidders are given in the Contract Documents and Specifications for this Contract, which may be obtained upon a deposit of $10.00 which will be remitted upon receipt of bid or the return in good condition of the copies so taken within thirty days after the opening of bids.

Each proposal must be accompanied by a certified check in the sum of $250,000 payable to the Delaware River Port Authority and drawn upon a National or State Bank or Trust Company having an office or place of business either in Philadelphia, Pennsylvania or Camden, New Jersey, and must not be enclosed with the sealed bid. The surety's consent must be shown. The bidder to whom the contract is awarded will be required to furnish a performance and Labor and Materialmen's Bond in the sum of 100 percent.

The Authority will afford prospective bidders an opportunity to inspect the site of the work.

The Authority reserves the right to waive any informalities in the bids received; to reject any or all bids, and to award the contract only to those experienced in this class of work and to the bidder whose proposal is deemed by the Authority to be most advantageous to the public interest.

DELAWARE RIVER PORT AUTHORITY
Joseph K. Costello
Executive Director

OFFICIAL PROPOSALS

EMPLOYMENT

REPLIES (Box No.): Address to office nearest you
NEW YORK: 330 W. 42nd St. (36)
CHICAGO: 520 N. Michigan Ave. (11)
SAN FRANCISCO: 68 Post St. (4)

POSITIONS VACANT

ARCHITECTURAL DRAFTSMAN and Designer, experienced. State age, experience, education, salary expected and when can report. Position permanent. P-9384, Engineering News-Record.

WANTED—BUILDING Construction Estimator by old established North Jersey Company. Must be experienced with emphasis on Industrial Construction. Must have engineering background and be able to handle the complete estimate. Excellent Salary—Profit Sharing—Opportunity to advance—Age 32-42. P-9232, Engineering News-Record.

ENGINEER—HEAVY Construction—Extensive experience in Highway Bridges—Overpasses—Foundations—Excavation—Water Conditions—Concrete in all phases. Must be able to handle bidding—Cost analysis. Profit Sharing—Fine Opportunity if capable. P-9233, Engineering News-Record.

BUILDING CONSTRUCTION Sales Engineer—To contact Industrial Firms for design and construction services. Must have construction engineering or architectural experience. Should have some established contacts but will consider ambition, intelligence and interest of applicant. Minimum salary $10,000, plus Profit Sharing. P-9234, Engineering News-Record.

HELP WANTED Male Building Estimator and Quantity Take-Off Man. Graduate Engineer preferred. Thoroughly experienced, permanent position with well established contractor with top-notch organization bidding competitively public works and commercial buildings throughout the South. Stanley W. Newman Company, Inc., P. O. Box 1646, Mobile, Alabama.

ENGINEER-ESTIMATOR. Young graduate civil engineer with heavy construction field experience and capable of assuming increasing responsibility leading to position as chief estimator for prominent general contractor operating throughout South and Southwest. Write full particulars, including education, availability, personal details and salary requirements to P-9302, Engineering News-Record.

ENGINEER EXPERIENCED on design and supervision of construction of water works, sewers, water treatment, sewage treatment, industrial buildings. State age, experience, education, salary expected and when can report. Position permanent. P-9285, Engineering News-Record.

VILLAGE ENGINEER and Superintendent of Public Works for western Westchester, N. Y. municipality, population 6,500, qualifications as required by N. Y. Civil Service. State age, experience, salary and availability. P-9457, Engineering News-Record.

POSITIONS VACANT

DESIGN ENGINEERS—Men having experience in design and preparation of drawings and reports for highway, sanitary sewer, water distribution and municipal-type storm drainage systems. Good pay for qualified men with training and experience. Opportunity for advancement. Furnish full information regarding education, training and experience, age, references and salary required. Replies strictly confidential. Department of Public Works, Baltimore County, Towson 4, Maryland.

ENGINEER, CIVIL, first class, experienced in construction work, field or office. P. O. Box 126, Wilmington, Del.

CORRESPONDENT, FIRST class, for involved controversial matters, with typing ability. P. O. Box 126, Wilmington, Del.

REGISTERED CIVIL Engineer, General Municipal Duties, City of National City, California.

(Continued on the opposite page)

WANTED

ESTIMATOR

Experienced construction estimator Southern part of the country. Familiar with all types of building construction. Steady employment and good salary offered to qualified man. In letter please state capabilities, experience, age and references.

P-9392, Engineering News-Record
520 N. Michigan Ave., Chicago 11, Ill.

WANTED
GENERAL SUPERINTENDENT

Over-all charge building construction in Washington, D. C. area. Must be familiar with costs and have administrative ability.

P-9435, Engineering News-Record
330 W. 42 St., New York 36, N. Y.

RESIDENT ENGINEER

For OHIO TURNPIKE. Must have had responsible qualifying supervision experience in latest large-scale highway construction practices and administration. Send detailed resume to:

Box 265, Milan, Ohio

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The advertising rate is $17.10 per inch for all advertising appearing on other than a contract basis. Contract rates quoted on request.
AN ADVERTISING INCH is measured ⅞ inch vertically on one column, 3 columns—30 inches—to a page. E.N.R.

Send NEW ADVERTISEMENTS: To New York City Office, 330 W. 42nd St., N. Y. 36 for October 22nd issue closing October 12th

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ENGINEERS for HIGHWAY DESIGN

Are you interested in a career service with the Maryland State Roads Commission?

The Division of Road Design, offers *Permanent Positions* to qualified men in order to carry out its extensive construction program. This is not just another job offer. This is an opportunity to become affiliated with a forward looking state highway department next door to the National Capital. Wanted especially are:
Young graduates in Civil Engineering. If not graduates, applicants must have considerable successful experience in Highway Design.
Qualified applicants will be employed immediately pending Merit System examination which will be held several months after employment. Immediate vacancies available to qualified men as:
Junior Assistant Highway Engineer II., $4013-4813 per annum
IN ADDITION, every position with the Maryland State Roads Commission means:
1. Immediate Employment at Base Salary
2. Annual Salary Increments (over period of 5 years)
3. Merit System Protection
4. Opportunities for Advancement
5. Annual Leave with Pay (15 days, cumulative to 30)
6. Generous Sick Leave with Full Pay
7. Liberal Retirement Benefits

Address W. Phelps Thomas, Personnel Manager, Maryland State Roads Commission, Tower Building, Baltimore 2, Maryland for application today.

PRESTRESSED CONCRETE
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P-9387, Engineering News-Record
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(Continued on the following page)

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P-9389, Engineering News-Record
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(Continued from preceding page)

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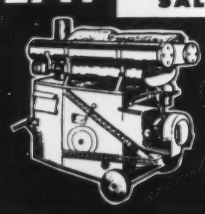

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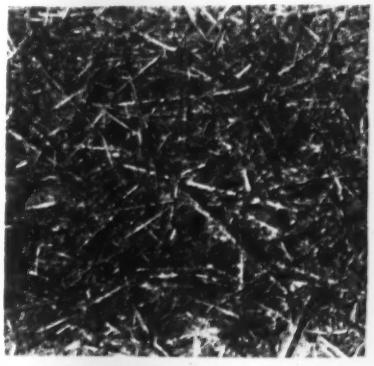
According to the manufacturer, the machine will do work in one hour with a four-man crew that normally would take nine men eight hours.

The 8-ft long discharge spout may be swung in a horizontal arc of 210 deg or positioned vertically through 40 deg. Standard attachment of the spout to the spreader is with a 90-deg elbow, but for extreme embankments a 45-deg elbow is available. With the 45-deg elbow a 40-ft maximum elevation of the mulch material is possible. In either case the horizontal range, under normal wind conditions, is about 50 ft and directioning of the discharge spout is boom controlled from an elevated operator's platform.

The mulch is projected by a 24-in. fan blower powered through V-belts by a 30.2-hp Wisconsin VP-4 gasoline engine. This same engine powers the three beaters that are designed to straighten the straws and separate the lumps in the baled material.

Standard equipment on the spreader

DISCHARGE SPOUT is controlled from the raised operator's platform. Standard container is used as reservoir in misting.



EVEN DISTRIBUTION of finely broken up mulch material is the result of spreader's action. Asphalt may be added for tack.

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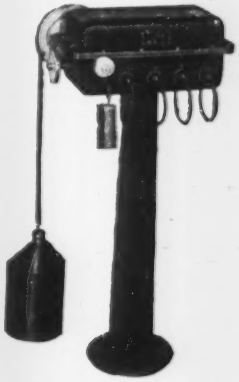

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is a feed chute that is adjustable to the height of the towing truck. While the machine is in operation the chute will handle about three bales per minute—the machine's rated capacity. Special chutes are available for handling loose materials.

The pumping equipment employed to add the asphalt to the mulch material may also be used to add to the high velocity air stream liquid fertilizers, insecticides or weed control solutions.

For misting, the spreader can be equipped with a special discharge spout, which has an 80-deg vertical swing and permits vertical range of 35 ft and a horizontal range reaching to 45 ft.

The spray attachment includes an 8.5-gpm pump with relief and bypass, four nozzles of various capacities, gage, hand valve hose lines, combination suction and agitator attachment and a barrel mount, which permits the use of standard containers as reservoirs for liquid sprays.

The 3,260-lb unit has an adjustable tow hitch for trailing behind any make of truck. The Finn Equipment Co., 2525 Duck Creek Rd., Cincinnati, Ohio.

Load-bearing facing tile finished on both sides

A new load-bearing facing tile, called Uniwall, has a ceramic glazed interior surface and an unglazed vertical scratch finish on the exterior face. This makes possible single-unit wall construction with finished facing inside and out.

Modular dimensions apply to all unit sizes, but they are equally adaptable for non-molecular construction. With allowance for ⅜-in. mortar joints, the nominal dimensions of the tile are: wall thickness, 8 in.; face size 4 x 12 in. A complete line of interior ceramic glazed shapes are available to supplement the standard units.

Corner and jamb units are of correspondingly nominal dimensions. Interior ceramic glazed facing units are 2 in. in thickness with nominal 4 x 12-in. face dimensions.

The tile is of vertical cell construction and is of hard-burned deaired fireclay. With coring vertical, the compressive strength of a single standard unit is 2,000 psi; in groups of five or more under the same conditions, compressive strength is 2,500 psi.

Unit specifications are included in

BATTERY-POWERED portable lubrication unit eliminates investment in pressure tanks and motors while at the same time affording "service station" type grease jobs. The Greasemaster is an electrically driven hydraulic ram pump operating off an ordinary auto or tractor battery. The grease unit fits on top of any standard size #25, #35 or #40 grease container. A ten-foot cable attaches to the battery and a 25-ft flexible greasing hose with a swivel coupler services all types of fittings. Pressure is variable up to 12,000 psi, and a pressure regulator can be set to protect sealed bearings against rupture. G & T Industries, 1420 Barwise Ave., Wichita, Kan.

Technical Bulletin UW-100. NATCO CORPS., 327-29 FIFTH AVE., PITTSBURGH 22, PA.

Silicone masonry coating gives invisible protection

Hayproc invisible silicone water repellent is a clear liquid for treating masonry walls to make them water resistant and reduce the tendency to staining.

The repellent is a five per cent solution of silicone resins in aromatic mineral spirits. According to the manufacturer, the coating is invisible when dry and may be applied in temperatures as low as zero F. It is reputed to be suitable for all types of masonry surfaces.

The silicone solution is claimed to be particularly advantageous because it lines the pores of the masonry surface but does not fill them, thus allowing the walls to breathe.

Use of the silicone is limited to outside walls above ground level. HAYNES PRODUCTS CO., 4007 FARNHAM ST., OMAHA 3, NEB.

Truck-mounted derrick raises and stops itself

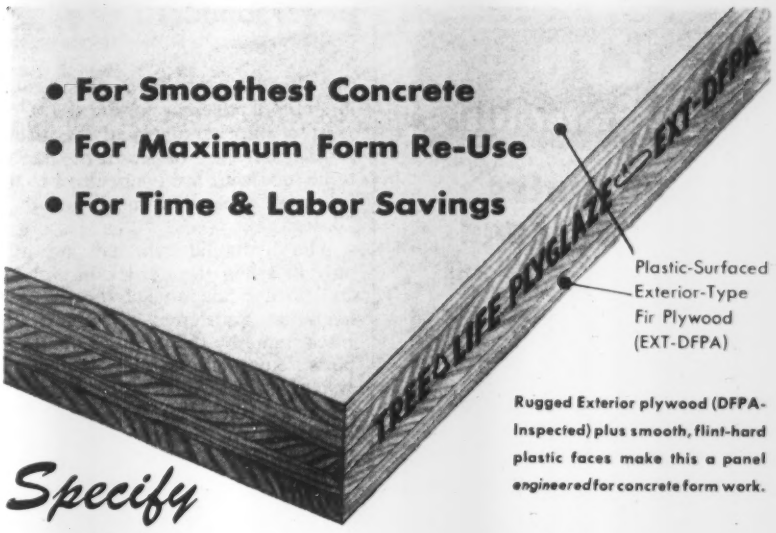
A new power operated derrick is designed to be mounted permanently on top of a utility body yet to leave the working and loading space within the body clear with ample headroom. The derrick is said to be set up for work or stowed away by one man in two to three minutes.

The side legs of the new derrick are secured in heavy swivel bearings on top of channel sections toward the rear of the body. Through chains, hydraulic cylinders pull the derrick up into working position or lower it back into its stow position overhead.

A center leg, with sheave, swings outward when the side legs are raised and can be fastened to 2 footplates on the rear of the truck or used with a special ground plate as a stiffleg. The telescoping center leg can be adjusted to several lengths without manual labor since the hydraulic power raises and lowers the sections while the operator merely inserts a locking pin.

When stowed overhead, the derrick is entirely out of the way of working space within the body. The center leg swings into a nested position where it is held with a locking pin. An automatic hold-down secures the assembly in its folded position.

Working capacity of the derrick is from 3,000 lb, fully extended, to 7,000 lb in short reach position. With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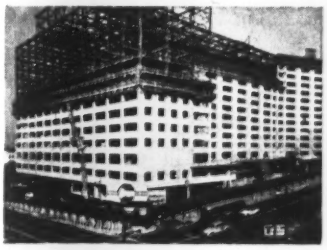

On the new Statler Hotel, Los Angeles, (above) PLYGLAZE concrete form panels averaged 15 re-uses. Huge Parklabrea apartment project, (below) required over 750,000 square feet of PLYGLAZE for ceilings and exterior walls. Concrete was so smooth that ceilings were merely painted and left exposed.

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the third leg on the ground a 10,000-lb straight pull may be exerted.

An adaptor arrangement is available for the center leg to permit the derrick to be used with live boom effect to the full rated capacity through an arc of 70 deg.

The hydraulic cylinders are used only to swing the derrick in and out and do not take any of the lift load; loads are transferred directly to the truck frame by the heavy channel supports. Automatic safeties protect the system against overstressing during the erecting cycle. J. H. Holan Corp., 4100 150th St., Cleveland 11, Ohio.

New Products briefs . . .

Pocket calculator—Derck's gage dial, a pocket-size calculator for machinists and mechanics, has been revised by its manufacturers, Goodmark, Inc., 21 E. 2nd St., Dayton 1, Ohio. Five inches in diameter and $\frac{1}{8}$ in. thick, the dial calculates letters and numbered drills, division of circles, distances across flats and corners of squares, decimal equivalents, national thread tables, machine screw tables, tapers and angles, pipe taps and Woodruff key sizes.

Plastic sheets—Fiberglas reinforced polyester sheets for use as structural elements in corrosive elements or baths are now available in two grades of 20,000 psi and 40,000 psi from the Strick Co., Plastics Div., Whitaker & Godfrey Ave., Philadelphia 24, Pa. The sheets are reported to exhibit excellent dimensional stability and resistance to a variety of chemicals, as well as high arc resistance and lower power factor. The material can be formulated in varying degrees of flexibility and molded to a variety of shapes.

Probe light—The Usalite Duo-Flex is an industrial flashlight with a gooseneck probe light extension for pinpoint inspection of inaccessible parts and equipment. When the side arm engaging the 10½-in. cable is extended, the light is transferred automatically to the smaller bulb. The flashlight is a product of U. S. Electric Mfg. Corp., 222 W. 14th St., New York 11, N. Y.

Pile driver hose—The Quaker Rubber Corp., Philadelphia, Pa., has developed a wire reinforced hose for steam pile driver service. Coated in natural rubber and toughened with three layers of horizontally braided high tensile steel and one of glass cord braid, the tube is calculated to resist temperatures up to 388 deg. F.

PORTABLE BELT CONVEYOR for handling loose materials is available in three belt widths—18, 24 and 30 in.—and nine lengths from 25 to 60 ft. Standard equipment for this model 125 includes roller bearing idlers and pneumatic-tired swivel wheels. Low tower design provides better road clearance and, it is said, greater strength. Maximum angles of inclination are 30 deg. for the shorter units and 25 deg. for the larger ones. Drive is optional—gasoline or electric. Atlas Conveyor Co., Clintonville, Wis.

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Trailers—An illustrated 23-pager describes the complete line of Talbert trailers. Included are specifications and a description of component parts that permit conversion for varied or specialized hauling problems. The line includes low-bed trailers, dump semi-trailers and mobile crane mounts. TALBERT CONSTRUCTION EQUIP. CO., 7950 W. 47TH ST., LYONS (CHICAGO SUBURB), ILL.

Water control apparatus—This comprehensive 250-page catalog shows the full scope of Rodney Hunt water control apparatus. It consists of eight sections; sluice gates, timber gates, hoists, fabricated gates, racks and rakes, valves and engineering data. Included are hundreds of diagrams and photographs with detailed descriptions and specifications. As an example of the catalog's completeness, the section on sluice gates alone covers 2,000 combinations of standard types and sizes; with special design features, applications, uses and advantages, installations and specifications comprising 16 chapters. The catalog is offered without obligation, but only to consulting engineers, contractors and others actively engaged in water control construction work. Requests must be made on business or official letterheads, stating title and position. Catalog WCA952, RODNEY HUNT MACHINE CO., 7 WATER ST., ORANGE, MASS.

Salt roads—"Morton Salt Stabilized Roads" describes salt stabilized roads and their construction. The catalog compares salt stabilization with other types of inexpensive road construction. Step-by-step photos are used in conjunction with text to give full direction for salvaging or rebuilding of an old roadbed with or without new aggregates added. Bulletin No. 453W, MORTON SALT CO., 120 SOUTH LA SALLE ST., CHICAGO 3, ILL.

Drafting machines—A two-color booklet presents a complete mechanical description of the various drafting machine models produced by the Charles Bruning Company. Included are gravity compensated, track type, civil engineering and detail machines. The last three pages of this 18-page booklet contain illustrations which show the styles of graduation available. All in all, 38 styles are shown. Write for "The Finest in Drafting Machines", CHARLES BRUNING CO., 4700 MONTROSE AVE., CHICAGO 41, ILL.

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EDITORIALS

Jobs for engineers

WHETHER there is a shortage or surplus of civil engineers is always difficult to establish with finality. But an encouraging report—from the job seeker's standpoint—comes out of the Denver office of the Bureau of Reclamation. A drastic cut in the staff separated some 60 engineers from their jobs. The cut was ordered in May. By the end of June practically all the engineers had obtained other positions. Many had a choice of several positions. In the face of a slackening off in construction, this one instance, at least, belies the existence of a surplus of civil engineers.

Construction outlook bright

THE OUTLOOK FOR CONSTRUCTION is good, as will be seen in the preliminary forecast for 1954 by the ENR statistical staff published on p. 21 of the Oct. 1 issue. The difference to be noted from past years—1946 to 1952—is that all categories of construction will not share in the improvement. And while this represents a changed condition—from boom to a more normal pattern—the readjustment should not be difficult since a major part of it has already occurred.

The proof is in the record. The total of new construction contracts for 1953 is down 7% from last year, but some types of work have continued to rise while others have experienced a recession. This pattern will continue in 1954, but with the drop in total contracts at a substantially reduced rate.

In this connection it is important to note that the Department of Commerce figures show construction still rising in almost all categories and in total. This is because they are based on construction "put in place" —i.e. payments for construction—and not new contracts. The Department of Commerce figures measure current business, while new contract figures reflect business ahead. Another difference will be noted in the totals reported—ENR's for heavy construction contracts being on the order of $15 billion for the year, the government's for all construction put in place being more nearly $35, with another $10 billion sometimes added for maintenance and repair expenditures. Each set of figures has its particular uses, but they are not comparable and should not be confused.

The encouraging aspect of the ENR contract figures lies in where increases have occurred during the current year. Based on awards during the first nine months, ENR statisticians estimate that state and municipal construction this year will show an increase of 20 percent over 1952 and that private work will be up 15 percent.

The big drop this year is in federal work, due chiefly to the huge contract awards last year of the Atomic Energy Commission and its virtual retirement from the construction market in 1953. In the long view, AEC work distorts the picture. If it is excluded entirely, contracts for the first nine months this year are 14% ahead of last year.

Looking ahead to next year, declines are anticipated in river and harbor work, irrigation and public and private housing, but these will be largely offset by gains in highway construction, most types of municipal public work and in commercial building, with capital expenditures by industry holding about level. Looking farther ahead, those types of construction now slowing down must be resumed in substantial volume. Only in that way can the nation continue to advance.

Fire safety responsibility

AS MIGHT BE EXPECTED, there are many lessons to be learned from the fire that destroyed the 1,500,000-sq ft automatic transmission plant of the General Motors Corp. in Livonia, Mich., on Aug. 12. This is evident not only from the report of the National Fire Protection Association (see p. 24) but also from the reports of other investigators. The unfortunate part of the matter is, however, that the lessons are not new to building designers and fire-protection engineers, and could long since have been applied.

The reason that they have not been applied is that the cost of a fire-safe factory is more than most owners are willing to pay. They believe that cutting up an assembly plant with fire walls interferes too much with production; that outlay for 100% coverage with a sprinkler system is too great; and that shielding of structural steel framing and roof with protective material is too expensive. Yet lack of fire walls, sprinklers and shielding were the principal factors in the rapid spread of fire in the Livonia plant.

Building designers cannot be held responsible legally for such holocausts, if there are no violations of local building regulations. For aside from the requirements of local building codes, the degree of fire safety to be built into a plant is for the plant's top management to decide. And the decision has to weigh initial construction costs against probable fire losses, insurance premiums, inspection costs, housekeeping expenses, effect on production, and the cost of maintaining, training and equipping a fire-fighting brigade.

But building designers do have a moral responsibility to do their utmost to protect the occupants of the buildings they design as well as the interests of the owner. It is their duty to point out to plant management that fire safety is not solely a matter of economics, that a reasonable investment in fire-protective materials or equipment is well worthwhile. The lessons learned from the GM fire and similar industrial holocausts can be put to good use if designers will recognize this responsibility.

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